COUNTY OF DUMFRIES.

TWENTY-NINTH

ANNUAL REPORT

UPON THE

Health and Sanitary Condition of the County.

1919.

BY

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County Medical Officer.

DUMFRIES:
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REPORT.

Population.

The population of the County Landward for 1919 was 46,458. This is based on an enumeration made by the police of all areas except Gretna and Eastriggs, where an estimate had to be made based partly on the number of houses known to be occupied and partly on other information. The figures for the Districts are :—

Districts	1919. M.	1919. F.	1919. Total.	1911 Census.	Acres.
Thornhill ...	5,475	6,034	11,509	11,710	214,968
Dumfries ...	3,914	4,525	8,439	8,555	78,503
Annan	7,265	8,489	15,754	10,515	83,865
Lockerbie ...	3,664	4,171	7,835	8,545	170,859
Langholm ...	1,431	1,490	2,921	3,242	136,113
County L'ward	21,749	24,709	46,458	42,567	684,308

Births.

The total number of Births registered in the County Landward were 1009 (535 male, 474 female). The rate per 1000 living was 21·718. The average rate for the previous ten years was 21·528. The figures for each District are :—

Districts.	M.	F.	Total.	Birth-rate per 1000 persons living.
Thornhill	151	132	283	24·589
Dumfries	91	84	175	20·737
Annan	177	150	327	20·757
Lockerbie	87	80	167	21·314
Langholm	29	28	57	38·255
County Landward ...	535	474	1009	21·718

Of the 1009 births, 889 were legitimate and 120 illegitimate. The proportion of legitimate births to married

1919.—5 (all in Annan District) :—

Post-partum hæmorrhage	1	case.
Pelvic abnormalities	1	,,
Ruptured perineum	1	,,
Rigid cervix	1	,,
Discharge from genitalia	1	,,

Intimation of Laying out Dead Bodies.

1917.—1 (Convulsions)
1918.—1 (Puerperal Fever)
1919.—2 (Influenza), 1 (Puerperal Fever)
All in Annan District.

Notification of Deaths.

1917.—1 (Convulsions)
1918.—1 (Premature Birth)
Both in Annan District.

Notification of Still Birth.

1917.—1
1918.—4
1919.—2
All in Annan District.

Notification of Attending Infectious Cases.

1918.—1 (Puerperal)
1919.—1 (Puerperal)
Both in Annan District.

Deaths.

The total number of Deaths registered, the transfers (in and out), and consequent adjustments were :—

Districts.	Deaths registered.	Transfers in.	Transfers out.	Adjusted figures. Total.	M.	F.
Thornhill ...	221	19	5	235	111	124
Dumfries ...	179	12	89	102	50	52
Annan	171	22	13	180	91	89
Lockerbie ...	113	18	10	121	54	67
Langholm ...	40	5	3	42	21	21
County L'ward	724	76	120	680	327	353

The Registrar General's figures show 70 transfers out in Dumfries District, the deaths of individuals with domiciles over the border or beyond the seas being retained by him and swelling the District death-rate beyond its normal.

The death-rates, crude, corrected for transfers, and also for age and sex distribution, are :—

Districts.	Crude death-rates.	Death-rates corrected for transfers.	Death-rates corrected also for age and sex distribution.
Thornhill	19·202	20·418	18·507
Dumfries	21·210	12·086	10·159
Annan	10·854	11·425	10·413
Lockerbie	14·422	15·443	13·972
Langholm	13·693	14·378	12·199
County Landward ...	15·584	14·637	13·069

The factors for correction of age and sex distribution are :—Thornhill, ·9064 ; Dumfries, ·8406 ; Annan, ·9114 ; Lockerbie, ·9048 ; Langholm, ·8485 ; County Landward, ·8929. These factors are calculated on the age and sex distributions of the population at the census 1911.

The classification of deaths according to cause in each District, and the death-rates, corrected for transfers and age and sex distribution, are given in the two tables following.

DEATHS IN COUNTY DISTRICTS IN 1919.

Cause of Death.	Thornhill.	Dumfries.	Annan.	Lockerbie.	Langholm.	Count L'wd.
Enteric Fever	...	...	...	...	...	...
Typhus Fever	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...
Measles	6	1	...	2	...	9
Scarlet Fever	2	1	...	...	...	3
Whooping-cough	...	1	1	1	1	4
Diphtheria	...	1	2	...	...	3
Influenza	...	2	3	1	5	11
Erysipelas	...	...	1	...	...	1
Pulmonary Phthisis	17	9	16	8	2	52
Tuberculous Meningitis	2	1	...	...	...	3
Abdominal Tuberculosis	3	1	1	1	...	6
Other Tuberculous Diseases	3	...	3	...	1	7
Malignant Diseases	19	7	17	14	2	59
Rheumatic Fever	...	...	...	...	...	...
Meningitis	4	2	4	2	...	12
Organic Heart Disease	30	13	21	8	6	78
Bronchitis	13	10	13	9	2	47
Pneumonia (all forms)	29	12	20	7	5	73
Other Respiratory Diseases	7	3	3	3	1	17
Enteritis (under 2 years)	...	...	2	2	...	4
Appendicitis	1	...	...	2	...	3
Liver Diseases (not Malignant)	2	...	2	1	...	5
Other Digestive Diseases	9	1	4	9	1	24
Nephritis (Bright's Disease)	4	...	4	1	...	9
Puerperal Sepsis	...	...	1	...	1	2
Other Diseases and Accidents of Pregnancy, &c.	...	1	...	...	...	1
Congenital Causes	14	10	8	7	1	40
Violence (excluding Suicide)	4	2	6	3	1	16
Suicide	3	...	2	...	...	5
Other Defined Diseases	53	23	46	35	10	167
Ill-Defined Diseases	10	1	...	5	3	19
Total	235	102	180	121	42	680

DEATH-RATES IN COUNTY DISTRICTS IN 1919.

(CORRECTED FOR AGE AND SEX DISTRIBUTION.)

CAUSE OF DEATH.	Thorn-hill.	Dum-fries.	Annan.	Lock-erbie.	Lang-holm.	County L'wd.
nteric Fever	...	...	...	...	...	...
yphus Fever	...	...	...	...	...	...
mallpox	...	...	...	...	...	...
easles	·472	·099	...	·231	...	·173
carlet Fever	·157	·099	...	...	...	·058
hooping-cough	...	099	·058	·115	·290	·077
iphtheria	...	·099	·116	...	...	·058
nfluenza	...	·199	·173	·115	1·452	·211
rysipelas	...	...	·058	...	...	·019
ulmonary Phthisis	1·339	·896	·926	·924	·581	·999
uberculous Meningitis	157	·099	...	...	...	·058
bdominal Tuberculosis	·236	·099	·058	·115	...	·115
ther Tuberculous Diseases	·236	...	·173	...	·290	·134
alignant Diseases	1·496	·697	·983	1·617	·581	1·134
heumatic Fever	...	...	...	...	...	...
eningitis	·315	·199	·231	·231	...	·231
rganic Heart Disease	2·362	1·295	1·215	·924	1·743	1·499
ronchitis	1·024	·996	·752	1·039	·581	·903
neumonia (all forms)	2·281	1·195	1·157	·808	1·452	1·403
ther Respiratory Diseases	·551	·299	·173	·346	·290	·327
nteritis (under 2 years)	...	...	·116	·231	...	·077
ppendicitis	·079	...	...	·231	...	·058
iver Diseases (not Malignant)	·157	...	·116	·115	...	·096
ther Digestive Diseases	·709	·099	231	1·039	·290	·461
ephritis (Bright's Disease)	·315	...	·231	·115	...	·173
uerperal Sepsis	...	...	·058	...	·290	·038
ther Diseases and Accidents of Pregnancy, &c.	...	·099	...	...	...	·019
ongenital Causes	1·102	·996	·463	·808	·290	769
iolence (excluding Suicide)	·315	·199	·347	·346	·290	·307
uicide	·236	...	·116	...	...	·096
ther Defined Diseases	4·174	2·291	2·661	4·042	2·905	3·210
l-Defined Diseases	·787	·099	...	·577	·871	·365
TOTAL	18·507	10 159	10·413	13·972	12·199	13·069

The AGE and SEX DISTRIBUTION of the 680 deaths was :—

		Estimated population in age periods.	Number of deaths.	Percentage of total.	Rate per 1000 living in each age-period.
MALES.	Under 1 year	535	57	17·43	106·54
	1— 5 years	1,836	23	7·03	12·53
	5—15 ,,	4,485	12	3·67	2·67
	15—25 ,,	3,975	19	5·81	4·78
	25—45 ,,	5,580	39	11·93	6·99
	45—65 ,,	3,906	62	18·96	15·87
	Over 65 ,,	1,432	115	35·17	80·31
FEMALES.	Under 1 year	474	33	9·35	69·62
	1— 5 years	1,902	19	5·38	9·99
	5—15 ,,	4,766	24	6·80	5·03
	15—25 ,,	4,021	14	3·96	3·48
	25—45 ,,	6,765	33	9·35	4·88
	45—65 ,,	4,703	79	22·38	16·80
	Over 65 ,,	2,078	151	42·78	72·66
TOTALS.	Under 1 year	1,009	90	13·23	89·20
	1— 5 years	3,738	42	6·18	11·24
	5—15 ,,	9,251	36	5·29	3·89
	15—25 ,,	7,996	33	4·85	4·13
	25—45 ,,	12,345	72	10·59	5·83
	45—65 ,,	8,607	141	20·74	16·38
	Over 65 ,,	3,510	266	39·12	75·78

INFANTILE MORTALITY.—The deaths of children under one year of age were 90 (57 male, 33 female). The rate per 1000 births was 89·20, the male infantile mortality being 106·54, while the female was 69·62. The mortality rates for the Districts were :—Thornhill, 88·24 ; Dumfries, 102·86 ; Annan, 79·51 ; Lockerbie, 95·81 ; and Langholm, 52·63. The returns are summarised in the following table :—

Return of Infantile Mortality for the Year ending 31st December, 1919, showing net Deaths from stated causes at various ages under one year of age in County Districts of Dumfriesshire.

CAUSE OF DEATH.	Under 1 week.	1 and under 2 weeks.	2 and under 3 weeks.	3 and under 4 weeks.	Total under 4 weeks.	4 weeks and under 3 months.	3 and under 6 months.	6 and under 9 months.	9 and under 12 months.	Total deaths under 1 year.
All Causes { Certified	...	...	...	...	...	...	...	...	...	...
All Causes { Uncertified	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...
Chickenpox	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	2	2
Scarlet Fever	...	...	...	...	...	...	...	...	...	...
Whooping-cough	...	...	...	...	...	...	...	1	...	1
Diphtheria and Croup	...	...	...	...	...	...	...	...	1	1
Erysipelas	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...
Abdominal Tuberculosis	...	...	...	...	...	...	...	...	1	1
Other Tuberculous Diseases	...	...	...	...	...	...	...	...	1	1
Meningitis (not Tuberculous)	...	...	...	...	...	1	...	...	1	2
Convulsions	1	1	..	...	2	...	2	...	...	4
Pneumonia (all forms)	...	...	...	1	1	2	2	2	2	9
Bronchitis	...	...	...	...	...	3	2	3	...	8
Laryngitis	...	..	...	...	...	...	...	...	...	...
Diarrhœa and Enteritis	...	...	1	1	2	1	...	...	...	3
Other Digestive Diseases	...	...	...	...	...	1	...	...	1	2
Congenital Malformations	2	...	...	...	2	2	...	...	...	4
Premature Birth	16	3	...	2	21	1	1	...	...	23
Atrophy, Debility, and Marasmus	5	1	2	1	9	3	1	...	...	13
Atelectasis	...	...	...	...	...	...	...	...	...	...
Injury at Birth	...	...	...	...	...	...	...	...	...	...
Suffocation, Overlying	...	1	...	...	1	2	...	...	...	3
Syphilis	...	...	...	...	...	...	...	...	...	...
Rickets	...	...	...	...	...	...	...	...	...	...
All other causes	2	1	2	2	7	1	1	2	2	13
TOTAL	26	7	5	7	45	17	9	8	11	90

The deaths in the County Districts classified in age-groups and according to cause were :—

CAUSE OF DEATH.	-1	1-	5-	10-	15-	25-	35-	45-	55-	65-	75-	All ages.
Enteric Fever . . .	...	...	...	...	...	...	...	...	...	...	...	...
Typhus Fever . . .	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...
Measles	2	3	2	1	1	...	...	...	...	...	...	9
Scarlet Fever . . .	...	1	2	...	...	...	...	...	...	...	...	3
Whooping-cough . . .	1	2	1	...	...	...	...	...	...	...	...	4
Diphtheria	1	2	...	...	...	...	...	...	...	...	...	3
Influenza	2	3	1	...	...	1	3	...	...	1	...	11
Erysipelas	...	...	...	...	...	...	...	...	1	...	...	1
Pulmonary Phthisis . .	...	...	1	5	12	13	6	7	6	2	...	52
Tuberculous Meningitis . .	...	...	2	...	1	...	...	...	...	...	...	3
Abdominal Tuberculosis. .	1	1	1	1	...	...	...	2	...	...	...	6
Other Tuberculous Diseases .	1	2	2	...	...	1	...	1	...	...	...	7
Malignant Diseases . .	...	...	...	...	...	...	4	6	16	21	12	59
Rheumatic Fever . .	...	...	...	...	...	...	...	...	...	...	...	...
Meningitis	2	1	3	...	2	1	...	2	1	...	...	12
Organic Heart Disease . .	2	...	1	...	2	4	3	3	14	24	25	78
Bronchitis	8	2	1	...	1	...	1	1	6	12	15	47
Pneumonia (all forms) . .	9	12	4	1	8	8	7	6	6	5	7	73
Other Respiratory Diseases .	1	4	...	...	...	1	1	1	3	4	2	17
Enteritis (under 2 years) .	3	1	...	...	...	...	...	...	...	...	...	4
Appendicitis . . .	...	1	...	1	...	...	1	...	...	...	...	3
Liver Diseases (not Malignant)	...	...	...	...	...	...	...	...	2	3	...	5
Other Digestive Diseases .	2	2	...	...	...	...	2	3	5	2	8	24
Nephritis (Bright's Disease) .	...	...	...	...	1	1	2	2	...	3	...	9
Puerperal Sepsis . . .	...	...	...	...	1	1	...	...	...	...	...	2
Other Diseases and Accidents of Pregnancy, &c. . .	...	...	...	...	...	...	1	...	...	...	...	1
Congenital Causes . . .	40	...	...	...	...	...	...	...	...	...	...	40
Violence (excluding Suicide) .	3	3	2	1	1	...	...	1	3	...	2	16
Suicide	...	...	...	...	...	1	...	1	1	2	...	5
Other Defined Diseases . .	11	2	...	2	3	3	4	16	20	38	68	167
Ill-Defined Diseases . .	1	...	...	1	...	1	1	1	4	6	4	19
TOTAL . . .	90	42	23	13	33	36	36	53	88	123	143	680

The Birth and Death Rates of the individual Parishes were :—

	Parish.	Estimated population.	Births.	Deaths.	Rates per 1000. Birth.	Rates per 1000. Death.
Thornhill District.	Closeburn	909	17	15	18·70	16·50
	Dunscore	867	17	18	19·61	20·76
	Durisdeer	752	8	23	10·64	30·58
	Glencairn	1243	20	42	16·09	33·79
	Keir	438	5	10	11·41	22 83
	Kirkconnel	3097	115	40	40·36	12·91
	Morton	1556	35	38	22·49	24·42
	Penpont	796	14	17	17·59	21·36
	Sanquhar	1590	46	26	28·93	16·35
	Tynron	261	6	6	22·99	22·99
Dumfries District.	Caerlaverock	672	15	14	22·32	20·83
	Dumfries	3315	54	20	16·29	6·03
	Holywood	870	23	21	26·44	24·14
	Kirkmahoe	1059	21	13	19·83	12·28
	Kirkmichael	674	18	12	26·71	17·80
	Mouswald	473	10	4	21·14	8·46
	Tinwald	639	12	9	18·78	14·08
	Torthorwald	737	22	9	29·85	12·21
Annan District.	Annan	2542	54	40	21·24	15·73
	Cummertrees	1007	12	15	11·92	14·90
	Dalton	514	4	9	7·78	17·51
	Dornock	2903	70	23	24·11	7·92
	Gretna	5101	104	27	20·39	5·29
	Half-Morton	377	6	2	15·91	5·30
	Kirkpatrick-Fleming	1139	29	22	25·46	19·31
	Middlebie	1506	29	31	19·26	20·58
	Ruthwell	665	19	11	30·07	16·54

	Parish.		Estimated population.	Births.	Deaths.	Rates per 1000.	
						Birth.	Death.
Lockerbie District.	Applegarth	...	738	15	3	20·32	4·06
	Dryfesdale	...	734	16	13	21·80	17·71
	Hoddom	...	1203	37	23	30·76	19·12
	Hutton...	...	582	10	7	17·18	12·02
	Johnstone	...	650	9	12	13·85	18·46
	Kirk.-Juxta	...	924	17	20	18·40	21·64
	Lochmaben	...	1290	29	19	22·48	14·73
	Moffat ...	...	471	13	7	27·60	14·86
	St. Mungo	...	533	7	7	13·13	13·13
	Tundergarth	...	334	7	4	20·96	11·98
	Wamphray	...	376	7	6	18·62	15·96
Langholm District.	Canonbie	...	1658	31	26	18·70	15·68
	Eskdalemuir	...	371	6	4	16·17	10·78
	Ewes ...	...	228	4	2	17·54	8·77
	Langholm	...	314	7	3	22·29	9·55
	Westerkirk	...	350	9	7	25·71	20·00

In two parishes the death-rate and birth-rate were equal. In eleven the death-rate was higher than the birth-rate.

Infectious Diseases.

The total number of notifications of infectious diseases received from the County Landward during 1919 was three hundred and ninety. Of these 239 were notified under the Infectious Diseases (Notification) Act, 1889, and 151 in terms of Regulations made under Section 78 of the Public Health (Scotland) Act, 1897. They comprised :—

(1) Notified under the Infectious Diseases (Notification) Act, 1889—

Typhoid Fever	3
Scarlet Fever	138
Diphtheria	75
Erysipelas	19
Puerperal Fever	3
Cerebro-Spinal Fever	1

(2) Notified in terms of Regulations made under Public Health (Scotland) Act, 1897, Section 78—

Ophthalmia Neonatorum	7
Malaria	7
Dysentery	1
Primary Pneumonia	17
Influenza Pneumonia	2
Tuberculosis (Pulmonary)	75
Tuberculosis (Non-pulmonary)	42

The proportion of cases notified to 1000 persons living was 8·39.

The Notifications received each month were :—

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Enteric Fever	3	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	4	37	19	21	7	8	7	6	9	9	3	8
Diphtheria	6	5	8	6	3	3	1	4	2	6	16	15
Erysipelas	2	...	2	1	...	...	2	1	4	1	3	3
Puerperal Fever	...	...	...	1	...	...	...	...	...	...	...	2
Cerebro-Spinal Fever	...	...	...	...	...	...	...	...	...	...	1	...
Ophthalmia Neonatorum	...	...	1	...	...	1	1	...	...	3	...	1
Malaria	...	...	...	...	...	...	...	4	2	1	...	...
Dysentery	...	...	...	...	...	...	...	...	...	1	...	...
Pneumonia (Primary)	...	...	...	...	...	...	...	3	2	7	2	3
Pneumonia (Influenzal)	...	...	...	...	...	...	...	...	1	...	...	1
Tuberculosis—												
Pulmonary	5	7	9	6	7	9	9	5	1	6	5	6
Non-Pulmonary	4	6	5	5	6	4	3	3	1	3	...	2

The Age-incidence is shown in the following summary of returns for each District made to the Board of Health :—

	At all ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards.
Enteric Fever	3	...	...	3	..	...	...	...
Scarlet Fever	138	4	25	78	18	12	1	...
Diphtheria ...	75	1	11	43	16	4	...	...
Erysipelas ...	19	...	1	2	...	8	7	1
Puerperal Fever	3	...	...	...	2	1	...	..
Cerebro-Spinal Fever ...	1	...	...	...	1	...	...	...
Ophthalmia Neonatorum	7	7	...	...	...	...	...	...
Malaria ...	7	...	...	...	2	5	...	...
Dysentery ...	1	.	...	...	...	1	..	...
Pneumonia (Primary) ...	17	...	..	3	4	3	4	3
Pneumonia (Influenzal)	2	...	...	...	...	...	2	...
Tuberculosis—								
Pulmonary	75	...	1	4	22	29	18	1
Non-Pulmonary	42	...	7	15	8	9	3	...

The Notifications from each District were :—

	Thornhill.	Dumfries.	Annan.	Lockerbie.	Langholm.	Totals.
Enteric Fever	3	...	...	...	...	3
Scarlet Fever	102	9	18	7	2	138
Diphtheria ...	16	11	41	7	...	75
Erysipelas ...	7	5	5	1	1	19
Puerperal Fever	...	...	2	...	1	3
Cerebro-Spinal Fever ...	1	...	...	...	...	1
Ophthalmia Neonatorum	1	1	4	1	...	7
Malaria ...	1	...	3	3	...	7
Dysentery ...	...	...	1	...	...	1
Pneumonia—						
Primary ...	6	6	4	...	1	17
Influenzal ...	1	1	...	...	...	2
Tuberculosis—						
Pulmonary ...	17	24	23	5	6	75
Non-Pulmonary	22	7	6	5	2	42
	177	64	107	29	13	390

No case of **Smallpox** was reported, and none have been known to occur in the County since 1904.

Two hundred and twenty intimations of Conscientious Objection to Vaccination were reported by Registrars—85 in Thornhill District (of which 49 were in Kirkconnel), 34 in Dumfries District, 81 in Annan District (26 of them being in Gretna and 20 in Dornock), 18 in Lockerbie District, and 2 in Langholm.

Three cases of **Enteric Fever** were notified from Wanlockhead. The clinical symptoms were indefinite, and suggested Influenza, which was prevalent at the time, rather than Enteric Fever. This view was supported by serum tests carried out in the County Laboratory.

The number of cases notified, deaths, and various rates during the past five years were :—

	1915.	1916.	1917.	1918.	1919.
Cases	1	3	4	1	3
Deaths	1	0	1	1	0
Sickness-rate per 1000 ...	·022	·060	·072	·018	·058
Mortality-rate per 1000 ...	·022	nil.	·018	·018	nil.
Case-fatality per 1000 ...	1000	nil.	250	1000	nil.

One hundred and thirty-eight cases of **Scarlet Fever** were reported from 24 parishes—60 in the first quarter, 36 in the second, 22 in the third, and 20 in the fourth. The greatest number notified in any one month was 37 in February. One hundred and two cases occurred in Thornhill District and were associated with a sharp outbreak in Sanquhar Burgh, the parishes of Sanquhar and Kirkconnel being responsible for 87 out of the 102. Over all, 101 households were attacked. The numbers affected in each may be shown in tabular form :—

Number of cases in each household.	Thornhill.	Dumfries.	Annan.	Lockerbie.	Langholm.	Total families.	Total cases.
1	50	9	14	5	2	80	80
2	10	...	2	1	...	13	26
3	3	...	...	...	...	3	9
4	4	...	...	...	...	4	16
5	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...
7	1	...	...	...	...	1	7
Totals	68	9	16	6	2	101	138

Eighty-three cases were removed to hospital and thirty-five treated at home. The outbreak in the parish of Sanquhar was complicated by the facts that the cases were as a whole very mild and non-characteristic and that influenza was prevalent at the time. Over forty per cent. of those removed to hospital did not desquamate. There was no evidence that the outbreak was milk-borne, nor did the age of the patients or results of school inspection suggest that the schools were an important factor in the spread of the disease. It is probable that mild unrecognised cases were the chief sources of infection. In five instances contact with a person later diagnosed as scarlatinal was proved, and six cases might be of the nature of "returns." A probable means of spread, whose importance cannot be exactly gauged, but which may be of considerable moment, was the Picture House. This institution was extremely popular, crowded at every performance during the outbreak, with a hot, moist atmosphere particularly favourable to the spread of contagious disease of any kind. It is a matter for consideration whether authorities should not be given larger powers to deal with such places during the prevalence of epidemics. The disease was not seriously prevalent in any other District of the County during the year.

The number of cases and deaths, the sickness and mortality rates, and the case-fatality from this disease during the past five years in the County Landward were :—

	1915.	1916.	1917.	1918.	1919.
Cases	332	175	97	76	138
Deaths	6	3	3	1	3
Sickness-rate per 1000	7·36	3·53	1·77	1·38	2·65
Mortality-rate per 1000	·133	·061	·055	·018	·058
Case-fatality per 1000	18·07	17·14	30·93	13·16	21·73

The notifications of **Diphtheria** were 75, and were received from 22 parishes. Nineteen were reported in the first quarter, twelve in the second, seven in the third, and thirty-seven in the fourth. Sixty-six families were affected, there being fifty-nine with one case, five with two cases, and two with three.

Fifty-one cases were proved bacteriologically to be true diphtheria; twenty gave a negative result in each examination; three died before examination could be made; and from one no swab was submitted. A limited outbreak occurred in Middlebie in the second quarter, comprising nine cases, chiefly resident in Eaglesfield. Fourteen contacts in the village were swabbed, with negative results. The disease again became prevalent in the Annan District during the last two months of the year, six cases being reported from Gretna and thirteen from Kirkpatrick-Fleming. In eight of the latter, however, the swabs were negative, and from the evidence available it seems probable that an outbreak of septic sore throat co-existed with that of diphtheria. The number of cases notified, of deaths, and of various rates for the past five years, were:—

	1915.	1916.	1917.	1918.	1919.
Cases	52	127	96	73	75
Deaths	2	10	4	3	3
Sickness-rate per 1000	1·15	2·56	1·75	1·33	1·44
Mortality-rate per 1000	·044	·202	·073	·055	·058
Case-fatality per 1000	38·46	78·73	41·67	41·09	40·00

No notifications of **Typhus, Relapsing Fever, Continued Fever, Cholera,** or **Plague** were received.

There was one notification of **Cerebro-Spinal Fever** (from Glencairn). The case was not typical. Bacteriological evidence did not support the diagnosis, and a rapidly fatal termination prevented further study. Certain aspects of the case suggested Tubercular Meningitis rather than Cerebro-Spinal Fever.

There were nineteen notifications of **Erysipelas**, three of **Puerperal Fever**, seven of **Ophthalmia Neonatorum**, seven of **Malaria**, one of **Dysentery**, and nineteen of **Pneumonia** (17 Primary, 2 Influenzal). The cases of Malaria and Dysentery occurred among ex-soldiers, who had been infected on service.

Under Regulations issued by the Board on 26th June, 1919, Malaria, Dysentery, Trench Fever, Acute Primary Pneumonia, and Acute Influenzal Pneumonia have become notifiable diseases. The Regulations further provide for specific notification to the Board, by the M.O.H., of any case of Trench Fever or Malaria in which he has reason to believe that the infection was contracted in the United Kingdom, also particulars regarding any outbreak of Dysentery. He is further required, in every case of Malaria, Trench Fever, or Dysentery in his District of which he becomes aware, to "take such steps as appear to him to be necessary and practicable to secure the treatment of the case in a suitable hospital, unless he is satisfied that treatment elsewhere than in an hospital will be carried out with all such precautions as are necessary to prevent the spread of the disease." In every case of Malaria he is to take all practicable steps to ensure that the person suffering is supplied with efficient mosquito netting, receives necessary quinine treatment, and proper advice as to the continuation of quinine treatment in order to prevent relapses, and also as to the precautions to be taken to prevent the spread of infection. Where two or more cases of Malaria have occurred in a District "in which the in-" fection has, in the opinion of the M.O.H., been contracted "within the District, the Local Authority may, and if "required by the Board shall, appoint and pay a medical

" practitioner approved by the Board, who shall (1) make " systematic visits to houses where Malaria has occurred " or where risk of Malaria infection arises, and shall offer " to examine persons therein who are suspected of being " infected with Malaria, and shall endeavour to obtain " material for microscopic examination in order to determine whether malarial infection is present, and (2) secure " that effective measures are taken to prevent the spread " of infection by the administration of quinine, by the use " of mosquito netting, and by the destruction of mosquitoes " and otherwise." On the occurrence of any case of Dysentery or Enteric Fever where it may be necessary to prevent the spread of infection, the M.O.H. is empowered to give notice in writing requiring that " (a) the person " specified in the notice shall discontinue any occupation " connected with the preparation or handling of food or " drink for human consumption, (b) children in the care " or charge of any person specified in the notice shall not " be sent to school, (c) suitable measures, to be specified " in the notice, shall be taken with respect to cleansing, " disinfection, disposal of excreta, destruction of flies, and " prevention of contamination of articles of food or drink " for human consumption." The regulations further give power for the examination of any person suspected to be a carrier of dysentery or of enteric fever who may be employed in any trade or business concerned with the preparation or handling of food or drink for human consumption, and for the prevention, during a period to be stated in the notice, of the employment of such carriers in such occupations if the result of the examination shows this to be necessary. Power is also given to take steps for the complete destruction of lice on the persons or clothing of individuals suffering from Trench, Typhus, and Relapsing Fever, and for the temporary segregation of contacts until their person or clothing have been completely freed from lice.

In connection with the treatment of Malaria by Quinine, the following note was, on the suggestion of the Deputy

Commissioner of Medical Services (Ministry of Pensions), prepared and issued to all the practitioners in the County :—

" COUNTY COUNCIL OF DUMFRIESSHIRE.

(PUBLIC HEALTH DEPARTMENT.)

Suggestions on the Quinine Treatment of Recurrent Malaria.

Consequent upon the demobilisation of H.M. Forces, medical men are now frequently called upon to treat cases of Malaria. Although many have recently had the opportunity of studying this disease in countries where it is endemic, there are others who are facing its problems for the first time, and it has been suggested by various practitioners, as well as by Medical Advisors of the Ministry of Pensions, that a short note on quinine treatment might perhaps be of value. The general tendency amongst those who have not had experience of Malaria during the war appears to be—

(I.) To under-estimate the dosage of quinine necessary for successful results.

(II.) To overlook the importance of tonic treatment of the anæmia which characterises the later stages of the disease.

The following scheme, which embodies methods adopted in the Army, has been prepared in consultation with various practitioners in Dumfriesshire who have had experience in treating Malaria overseas.

1. *Before* commencing treatment—
   (a) Make two blood films, sec. art. for microscopic examination. (Slides, and boxes for sending by post, may be obtained from the County Laboratory.)
   (b) Administer a purgative—calomel, followed by

saline. *This is important*, and should not be neglected.

2. Administer quinine. 15 grains t.i.d. for three days, or longer if pyrexia continues. However mild the attack may have been, the patient should be kept in bed during this period.

3. The amount of quinine may then be gradually reduced during the next two or three weeks—say, 10 grains t.i.d. for a week, and 10 grains b.i.d. the following week.

4. Thereafter, discontinuous treatment with quinine should be carried out for *at least three months.* During this treatment the patient should, whenever possible, carry out his ordinary work. The quinine may be given as—

   (a) Gr. X. once daily ;
   or (b) Gr. XXX. on each of two successive days each week (*e.g.*, Saturday and Sunday) ;
   or (c) Gr. X. t.i.d. on one day each week.

The systematic administration of this after-treatment is of more importance than the precise method chosen. Method (b) is, perhaps, the most satisfactory.

As Malaria entails a great destruction of the red blood corpuscles and consequent anæmia, it is necessary, in every case, to adopt measures to counteract this. Iron and arsenic should be administered, and general tonic treatment adopted.

IMPORTANT.—Quinine should *not* be given in tablet form, as it is apt to be incompletely absorbed.

In cases of pernicious or cerebral Malaria, or in cases where there is continued vomiting, quinine must be given by the intra-venous or intra-muscular method. Details as to the technique may be found in standard works, or in a brochure drawn up by Sir Ronald Ross and Lt.-Col. James, copies of which may be obtained on application to the County Medical Officer."

The incidence, &c., of **Tuberculosis** during 1919 is dealt with in the following report of Dr Ritchie :—

Sir,

I beg to submit a report on the anti-tuberculosis measures adopted in the County during 1919. This work suffered considerably in consequence of the European War and the resulting depletion of our staff, and even after my return from military service in 1919 it was not possible to restore the pre-war methods until September, when Dr Barr was appointed Assistant Tuberculosis Officer. During that transitional period only the most essential part of the work could be undertaken, and many interesting, though not immediately important, points could not be investigated as they were before the war, and will be in future. This report is, therefore, necessarily less extended than that last published in 1914.

The number of cases of Tuberculosis notified yearly since 1914 (when all forms of the disease were first notifiable) has been as follows :—

	Pulmonary.	Non-pulmonary.	Total.
1914	109	22	131
1915	89	45	134
1916	142	56	198
1917	117	54	171
1918	117	40	157
1919	95	44	139

The sharp rise in the number of notifications of Tuberculosis in 1916, and its subsequent decline, is of interest. It may probably be connected with the influx of war-workers from other parts of the country which took place about that time.

Cases notified in 1919 :—

The actual number of cases notified was 140. One case, however, was proved to be non-tubercular, and the notification was subsequently withdrawn. The remaining 139 comprised :—

	Males.	Females.	Total.
Pulmonary	49	46	95
Non-pulmonary ...	17	27	44
Total	66	73	139

The non-pulmonary cases were classified as—

Tuberculosis of Bones and Joints	9 cases.
Tuberculosis of Glands	22 ,,
Tuberculosis of Abdominal Viscera	8 ,,
Tuberculosis of Central Nervous System ...	1 ,,
Tuberculosis of Genito-Urinary System	2 ,,
Tuberculosis of Larynx and Pharynx	2 ,,
Total	44 ,,

The localities from which cases were notified were :—

	Pulmonary.	Non-pulmonary.	Total.
Thornhill District ...	17	22	39
Dumfries District ...	24	7	31
Annan District ...	23	6	29
Lockerbie District ...	5	5	10
Langholm District ...	6	2	8
Annan Burgh	8	...	8
Sanquhar Burgh ...	1	1	2
Lockerbie Burgh ...	4	...	4
Moffat Burgh	2	1	3
Langholm Burgh ...	4	...	4
Lochmaben Burgh ...	1	...	1
Total	95	44	139

It is worth noting that 50% of the total non-pulmonary cases were notified from the Thornhill District (22 cases). Of those, 14 were resident in the village of Kirkconnel.

The QUARTERLY-INCIDENCE of NOTIFICATIONS was as follows :—

First Quarter	42
Second Quarter	40
Third Quarter	31
Fourth Quarter	26
Total	139

The AGE-INCIDENCE in those 139 cases was :—

Under 1 year	0
1 to 5 years	8
5 to 15 years	20
15 to 25 years	33
25 to 45 years	45
45 to 65 years	30
Over 65 years	3
Total	139

As regards NATIONAL INSURANCE, the 111 cases over 15 years old showed :—

	Males.	Females.	Total.
Insured	36	21	57
Not insured	21	33	54
Total	57	54	111

Trade or Profession.

Of the total cases notified, 23 were described as having no occupation and 17 were school children. The remainder were certified as :—

Domestic Duties ...	34	Fishmonger	1
Soldiers	17	Gardener	1
Clerks	5	Glove-maker	1
Farm Servants ...	4	Ham Curer	1
Labourers	4	Insurance Agent ...	1
Munitioneers	3	Iron Moulder	1
Nurses	3	Lady Companion ...	1
Farmers	2	Lawyer	1
Railway Employees ...	2	Mason	1
Miners	2	Matron	1
Drapers	2	Shoemaker	1
Banker	1	Surveyor	1
Blacksmith	1	Tailor	1
Drainer	1	Tractor Driver ...	1
Dressmaker	1	Turner (Metal) ...	1
Dyker	1	Wood-worker ...	1

In addition to those described as soldiers, four other male patients were ex-service men.

The methods in which the attention of this Department is drawn to the existence of Tuberculosis may be described as :—

(1) *Notification by General Practitioners.*—This is, of course, the most usual way, and should apply in practically every case.

(2) *Notification from Hospitals* — It sometimes happens that a patient is admitted for treatment for an undiagnosed complaint which, after observation in hospital, is considered to be tubercular. In such instances the facts are at once communicated to this Department, the patient is seen by the Tuberculosis Officer, and, if he coincides in the diagnosis, the case is accepted.

(3) *Notification from Other Areas.* — When a tubercular patient changes his residence the fact is communicated by the M.O.H. of the district he leaves to the M.O.H. of the district he goes to. There is no doubt, however, that a considerable number of patients do not inform

the M.O.H. or Tuberculosis Officer of impending changes of address, and so do not come under observation in their new homes for some time.

(4) In a number of cases of ex-soldiers suffering from tuberculosis, the first intimation is received from the Army Authorities or Ministry of Pensions.

(5) Occasionally attention is drawn to deaths, certified in the Registrar's returns as due to tuberculosis, of persons regarding whom no previous intimation has been received. This refers, generally, to the less obvious forms of tuberculosis where the diagnosis has been in some doubt.

Sanatorium Treatment.

The disposition of the cases notified in 1919 regarding sanatorium or hospital treatment was :—

	Males	Females.	Total.
Sent to Westmorland Sanatorium	6	5	11
Sent to Bridge-of-Weir Sanatorium	2	2	4
Sent to Lochmaben Hospital	6	6	12
Sent to Dumfries and Galloway Royal Infirmary	7	12	19
Sent to Other Institutions*	...	1	1
Total	21	26	47

(*Patient made private arrangements.)

In addition to the above, 6 patients previously notified were admitted or re-admitted to sanatorium or hospital during the year, making a total of 53.

The after-history of those 139 patients may be summarised as follows :—

	Surviving at end of year.	Died before end of year.	Total.
Treated at Home	51	41	92
Treated in Sanatorium or Hospital	35	12	47
Total	86	53	139

Among the 53 cases which did not survive till the end of the year, the period elapsing between notification and death was :—

Notified after death	7
Died within 1 month of notification	16
Died within 1 to 3 months of notification ...	21
Died within 3 to 6 months of notification ...	7
Died more than 6 months after notification ...	2
Total	53

Shelters.

There were, at the end of the year, twenty-three shelters of the County pattern in use, including two at Lochmaben Hospital, where there is also a large shelter used during the day as an open-air sitting-room. This came originally from Drumlanrig Castle Auxiliary Hospital.

I am inclined to believe that of all measures at present available throughout the County for anti-tuberculosis work the provision of shelters is, perhaps, the most important. Provided that the patients are not too far advanced when commencing shelter treatment, and that they are sufficiently intelligent and conscientious to carry it out properly, excellent results may be obtained. Many patients, conscious of the benefit they have experienced, become enthusiastic devotees of shelter life, and one is not infrequently faced by the dilemma of having either to take away a shelter from a patient who is anxious to continue shelter life, or to leave unprovided one who is anxious to begin it. There are at present four patients in the County who were provided with shelters during 1914 and have used them constantly since. All had well-marked pulmonary tuberculosis and were excreting tubercle bacilli when they were introduced to "shelter life"; and although one might hesitate to say definitely that they have been cured, in three cases the disease has been arrested and the patients are fit for full work, while in the fourth there has been great and progressive improvement, and the patient has been doing light work for several years. That equally good results could have been obtained by treating those patients without shelters is very questionable; and to compel them, against their strongly expressed wish, to return to the relatively unhygienic conditions of cottage life—with the possibility of causing a recrudescence of the disease—in order that their shelters may be used by other patients, is a responsibility that one is rather chary of assuming.

The following notes upon patients using shelters at the time of writing, exclusive of those in Lochmaben Hospital, may be of interest :—

No.	Condition when Shelter Life began.	Duration of Shelter Life.	Present state.
1.	Pulmonary (T.B.+); too ill for removal to sanatorium.	5½ years.	Disease appears arrested able for 5 hours' work day.
2.	Pulmonary (T.B.+), with surgical complication later.	4 years.	A very chronic case: no able for some hous work.
3.	Pulmonary (T.B.+). Empyema. Housing conditions unsatisfactory.	6 years.	Quiescent: has done ligh work for last 5 year
4.	Surgical case.	1 year.	Making slow progress.
5.	Pulmonary (T.B.+).	3 years.	Improving gradually.
6.	Pulmonary (T.B.+).	6 years.	Disease appears arrested doing full work blacksmith.
7.	Surgical case.	Less than 1 year.	Improving gradually.
8.	Pulmonary (T.B.+).	6 years.	Apparently arrested.
9.	Pulmonary (T.B.+).	4 years.	Apparently arrested.
10.	Pulmonary (T.B.+).	6 years.	Apparently arrested.
11.	Surgical case.	Less than 1 year.	Little improvement as ye
12.	Pulmonary (T.B.0).	1 year.	Greatly improved.
13.	Pulmonary (T.B.+).	1 year.	Ex-soldier: not improvin
14.	Pulmonary (T.B.0).	Less than 1 year.	Little change.

No.	ondition when Shelter Life began.	Duration of Shelter Life.	Present State.
115.	Surgical case (Spine).	5 years.	Great improvement ; walks freely.
116.	Pulmonary (T.B.0).	5 years (interrupted).	Chronic ; fit for light work.
117.	Pulmonary (T.B.0).	5 years (interrupted).	Improved ; fit for light work.
118.	Pulmonary (T.B.+).	Less than 1 year.	Doing well.
119.	Pulmonary (T.B.+).	Less than 1 year.	Not doing well ; came under observation too late.
120.	Pulmonary (T.B.0).	Less than 1 year.	Doing well ; working.
121.	Pulmonary (T.B.+).	Less than 1 year.	Little change.

Those results suggest the advisability of increasing the use of shelters by tubercular patients as much as possible. As a general rule, patients make better use of shelters after a period of sanatorium training—though this, of course, is not insisted upon in all cases.

The general administrative methods and the forms used in reporting are practically the same as in the previous years, so that I need not discuss them further.

I am, Sir,

Your obedient Servant,

John Ritchie, D.M.O.H. and T.O.

Hospitals.

Eighty-three cases of Scarlet Fever, sixty-three of Diphtheria, four of Erysipelas, and one of suspected venereal disease in an infant were removed to hospitals from County Districts. Ninety-four cases of Scarlet Fever and twenty-two of Diphtheria were removed from Burghs. The admissions to each hospital were :—

		Scarlet Fever.	Diphtheria.	Erysipelas.	
Thornhill	Thornhill District	52	8	1	135
	Sanquhar Burgh	73	1	...	
Lochmaben	Dumfries District	9	10	...	43
	Lockerbie District	7	6	...	
	Lochmaben Burgh	...	...	...	
	Lockerbie Burgh	2	...	...	
	Moffat Burgh	4	1	...	
	Thornhill District	1	2	...	
	Annan District	...	...	1	
Annan	Annan District	12	37	2	85
	Annan Burgh	14	20	...	
Eskdale	Langholm District	2	...	...	3
	Langholm Burgh	1	...	...	

In addition to the above, there were admitted to Lochmaben Hospital five cases of Scarlet Fever from Dumfries and Maxwelltown, fifteen cases of Pulmonary Tuberculosis from the County generally, and to Annan Hospital the case of suspected venereal rash in an infant whose mother had died.

The Smallpox Hospital has not been in occupation during the year. It seems to be practically impossible to get a gravitation supply of water, and on this account and for other reasons it is most desirable that a change of site should be obtained in order to facilitate the efforts that ought to be made to keep the hospital in a state fit for immediate occupancy.

The resources of Thornhill Hospital were again strained in the beginning of the year by an outbreak of Scarlet Fever in and around Sanquhar. This outbreak, as already indicated, was associated with one of Influenza, and certain of the cases due to the latter seem to have simulated Scarlet Fever. This hospital is now inadequately served by the horse ambulance, and it is hoped that as soon as circumstances will permit this may be replaced by a good motor ambulance.

The want of a similar ambulance is also being felt at Lochmaben, both of these hospitals having extensive Districts to serve. Both are dependent on local hirers, who do not appear to have many horses in their stables, and a considerable delay sometimes occurs in removals.

At Annan Hospital a pavilion erected by the Ministry of Munitions during the war has not been brought into use, and cannot be without an extension of the administrative block to house the extra nurses that will be required. Fortunately there has been no serious strain on the other parts of the hospital.

As the figures in the table above show, the Eskdale Hospital has only admitted three patients during the year.

Housing.

A survey of houses containing from one to five rooms was made during the year, three special inspectors being appointed for the purpose.

The houses surveyed in **Thornhill District** included 122 of one room each, 1183 of two rooms, 581 of three rooms, 287 of four, 151 of five, and 4 of six—a total of 2328.

1889 are built of stone, 317 of brick, and 82 of stone and brick, the remainder being of concrete (34) or wood and iron (6).

Walls were classed as " good " in 571, " fair " in 1103, " poor " or " damp " in 654. A damp-proof course was present in 547, leaving 1781 unprovided. 918 were without stoothing, or lathing and plaster. Floors were marked as " poor " in 526.

A scullery was provided in 1434, a pantry in 552, cupboards or presses in 913, a bath in 167, a wash-house in 1098, and a coal-house in 1750.

609 had water-closets, 1447 pail-privies, 2 common privies (without pails), and in 270 no such provision was made, or, if it had been, had disappeared. 150 of the conveniences were for the use of two or more families.

Drains were provided for 1542 houses.

Of the 122 one-roomed houses 3 are returned as "damp," 70 as "poor," 49 as "fair" or "good." Of the 73 returned as "damp" or "poor" 27 were overcrowded, and this condition was observed in 13 of the 49 "fair" or "good."

Of the two-roomed houses 404 are "damp" or "poor." 70 of these also showed overcrowding. In the number returned as "fair" or "good" 177 were overcrowded.

The houses surveyed in **Dumfries District** included 55 of one room each, 579 of two rooms, 392 of three rooms, 174 of four, 84 of five, and 12 of six—a total of 1296.

The great majority (about 1200) are built of stone and lime, 79 are of brick, and a few are of wood or wood and iron. The roofs are mostly constructed of slate; a small proportion of tiles or other material. 39 are thatched. Rhones are usually provided, but in 80 (including the thatched houses) there were none.

Walls were classed as "good" in 303, "fair" in 509, as "damp" in 463, and "poor" in 21. A damp-proof course was observed in 122, leaving 1174 unprovided. 706 were without stoothing or lathing and plaster. Floors were marked as "poor" in 233.

A scullery was provided in 502, a pantry in 495, cupboards or presses in 510, a bath in 36, a wash-house in 412, and a coal-house in 905.

89 had water-closets, 22 earth-closets, 902 pail-privies, 18 common privies (without pails), and in 265 no such provision was made, or, if it had been, had disappeared. 158 of the conveniences provided were for the use of two or more families.

Drains were provided for 551 houses.

Of 55 one-roomed houses, 31 were returned as "damp" or "poor"; 12 were also overcrowded, having three or more persons to a house. Among the 24 returned as "fair" or "good," 8 were similarly overcrowded.

Of 579 two-roomed houses, 297 are returned as "damp" or "poor." In some the dampness appears to be slight; but, taken along with other defects, 240 of this number are below the standard of habitability recommended in the Majority Report of the Royal Commission on Housing in Scotland. 51 of the 240 were also overcrowded in respect of having six or more persons in each, while of the houses not included in this category 60 were similarly overcrowded.

In **Annan District** the houses surveyed were 1557, and included 65 of one room, 633 of two rooms, 551 of three, 218 of four, 84 of five, and 6 of six rooms each. The houses recently built by the Ministry of Munitions in Gretna and Eastriggs townships are not included.

1423 are built of stone and lime, 117 of brick, 6 of stone and brick, 7 of stone and clay, and the remainder of wood or wood and iron.

Walls are classed as "good" in 788, "fair" in 610, "poor" or "damp" in 159. A damp-proof course was observed in 62, leaving 1495 unprovided. 846 were without stoothing or lathing and plastering. Floors were marked "poor" in 105.

A scullery was provided in 960, a pantry in 819, cupboards or presses in 681, a bath in 63, a wash-house in 548, and a coal-house in 1286.

131 had water-closets, 9 earth-closets, 1165 pail-privies, and 47 common privies. In 215 no provision was made. 191 of the conveniences were for the use of two or more families.

Drains were provided for 880 houses.

Of the 65 one-roomed houses, 15 were classed as "damp" or "poor." Four of the 15 were overcrowded in respect of having three or more persons in each. Of the 50 marked "fair" or "good," 13 were similarly overcrowded.

Of the 633 two-roomed houses, 115 were classed as "damp" or "poor." Some of them suffer from a slight amount of damp, but at least 95, on account of this and other defects, are below the standard of habitability recommended by the Majority Report of the Housing Commission. Eighteen of the 95 were overcrowded in respect of there being six or more persons to a house. Of the 518 returned as "fair" or "good," 72 are similarly overcrowded.

The houses surveyed in **Lockerbie District** included 49 of one-room, 558 of two rooms. 506 of three, 245 of four, 128 of five, and 5 of six rooms each—a total of 1491.

1469 of these are built of stone and lime, 14 of stone and brick, 5 of brick, and 3 of wood.

Walls are classed as "good" in 822, "fair" in 309, "damp" or "poor" in 360. A damp-proof course was found in 304, leaving 1187 unprovided. 541 were without stoothing or lathing and plastering. Floors were marked as "poor" in 74.

A scullery was provided in 849, a pantry in 883, cupboards or presses in 597, a bath in 35, a wash-house in 495, and a coal-house in 1116.

96 had water-closets, 346 earth-closets, 741 pail-privies, 10 common privies. In 298 no provision was made, or, if it had been, had disappeared. 101 of the conveniences were for the use of two or more families.

Drains were provided for 1146 houses.

Of the 49 one-roomed houses surveyed, two were parish sick-houses, seven bothies or rooms for single men, three were being used in conjunction with larger houses, six were empty, and thirty-one occupied. Fifteen were marked as suffering from damp or in poor condition: thirty-four were "fair" or "good." Overcrowding (more than two persons to a house) was found in eight.

Of the 559 two-roomed houses, 168 suffered more or less from damp, and 21 were in poor condition. Ninety-six of these also suffered from other defects to such an extent as to bring them under the standard of habitability recommended by the Majority Report of the Housing Commission.

In **Langholm District** 530 houses were surveyed--16 of one room each, 157 of two rooms, 210 of three, 109 of four, 36 of five, and 2 of six.

450 were found to be built of stone and lime, 59 of brick, 20 of stone and brick, and 1 of stone and clay.

Walls were classed as " good " in 309, " fair " in 122, " damp " or " poor " in 99. A damp-proof course was present in 35, leaving 495 unprovided. 191 were without stoothing or lathing and plaster. Floors were marked as " poor " in 21.

A scullery was provided in 298, a pantry in 407, cupboards or presses in 354, a bath in 6, wash-house in 91, and a coal-house in 359.

89 had water-closets, 3 earth-closets, 263 pail-privies, 27 common privies, and in 148 no such provision was made, or, if it had been, had disappeared. 36 of the conveniences were for the use of two or more families.

Drains were provided for 415 houses.

Of the 16 one-roomed houses, 5 have been returned as " damp " or " poor." Two of them are empty, and the other three are not in a good habitable state. Overcrowding was present in one, as well as in one of those returned as " fair."

Of the 157 two-roomed houses, 36 are returned as " damp," 12 as " poor." The amount of " damp " is very varied, but sufficient, with other defects to bring 28 below the standard of habitability. Four of this number are overcrowded to the extent of there being six or more persons in the house. Of those not included in this category, 7 are similarly overcrowded, As a result of the survey, notes of defective houses in the various districts were made up and ordered to be sent to proprietors. In the case of Thornhill, Dumfries, Annan, and Langholm Districts this was done from the County Health Offices; in the case of Lockerbie District from the District Clerk's. A covering letter in the following terms was sent with these notes:—

"COUNTY COUNCIL OF DUMFRIES.

"County Health Office,
County Buildings, Dumfries.

"Dear Sir/Madam,

"During 1919 a survey of houses of one to five rooms was made in the Rural Districts of this County. From the reports, I have made a return of houses marked 'Damp' or 'Poor,' and noted other defects (when these existed) which, along with the damp, &c., seemed to bring such houses below the present standard of habitability—a standard which has risen considerably since the publication of the Report of the Royal Commission on Housing in Scotland. I am instructed by the.............................. District Committee to send you the notes of................. house..., in which you are interested as proprietor or agent, and shall be glad to hear from you, and more particularly whether you are prepared to take steps for the remedy of defects and improvement of the house.

"In this connection I may draw your attention to the Housing, Town Planning, &c. (Scotland) Act, 1919, and Housing (Additional Powers) Act, 1919; and more particularly to Sections 19 and 25 of the former, which are appended to this letter.

"I am,

Your obedient Servant,

....

"HOUSING, TOWN PLANNING, &c. (SCOTLAND) ACT, 1919.

"*Section* 19.

"(1) Where the owner of a house or building applies to the local authority of the district in which the house or building is situated for assistance for the purpose of carrying out works for the reconstruction, enlargement, or improvement of the house or building, and the authority are of opinion that after the works are carried out the house or building would be in all respects fit for habitation as a house or houses for the working classes, and that the circumstances of the district in regard to housing accommodation are such as to make it desirable that the works should be carried out, the authority may lend to the owner the whole or any part of such sum as may be necessary to defray the cost of the works, and any costs, charges, or expenses incidental thereto:

"Provided that the loan shall not exceed one-half of the estimated value of the property to be burdened with the heritable security for the loan, unless some additional or collateral security is given sufficient to secure the excess.

"(2) Before the works are commenced, full particulars of the works and, where required by the local authority, plans and specifications thereof shall be submitted to the authority for their approval, and before any loan is made the authority shall satisfy themselves that the works in respect of which the loan is to be made have been carried out in a satisfactory and efficient manner.

"(3) The raising of money for the purpose of making a loan under this section shall be a purpose for which the local authority may borrow for the purposes of Part III. of the principal Act.

"(4) For the purpose of this section, 'owner' includes joint owner, fiar, feuar, and lessee under a lease recorded under the Registration of Leases (Scotland) Act, 1857, whereof a period of not less than ten years in excess of the period fixed for the repayment of the loan remains unexpired at the date of the loan.

" *Section* 25.

" (1) If the owner of any house suitable for occupation by persons of the working classes fails to keep such house in all respects reasonably fit for human habitation, then, without prejudice to any other powers, the local authority may serve a notice in writing upon the owner of such house requiring him within a reasonable time, not being less than twenty-one days specified in the notice, to execute such works as may be necessary to make the house in all respects reasonably fit for human habitation:

" Provided that, if such house is not capable without reconstruction of being rendered fit for human habitation, the owner may, within twenty-one days after the receipt of such notice, by written notice to the local authority, declare his intention of closing the house for human habitation, and thereupon a closing order shall be deemed to have become operative in respect of such house. Any question arising under this proviso shall, in case of difference between the owner and the local authority, be determined by the sheriff.

" (2) If the notice of the local authority is not complied with the authority may—

" (a) at the expiration of the time specified in that notice, if no such notice as aforesaid has been given by the owner; and

" (b) at the expiration of twenty-one days from the determination by the sheriff, if such notice has been given by the owner, and the sheriff has determined that the house is capable without reconstruction of being made fit for human habitation,

do the work required to be done, and may recover the expenses incurred by them from the owner, and for that purpose the provisions of sub-sections (5) and (6) of section fifteen of the Housing, Town Planning, &c., Act, 1909, with respect to the execution of works and the recovery of expenses by local authorities, and with respect to the landlords' right of appeal, shall apply as if the owner were the landlord, and with such other adaptations as may be necessary.

"(3) In this section 'owner' shall have the same meaning as in the Public Health (Scotland) Act, 1897.

"(4) This section shall be deemed to be part of Part II. of the principal Act."

The replies for the four Districts may be summarised :—

	Thornhill.	Dumfries.	Annan.	Langholm.
No reply	225	250	27	13
Acknowledged only ...	84	...	...	2
Will not or cannot improve	34	91	52	4
Will improve or repair if given time	271	43	87	63
Will reconstruct or replace	9	13	...	...
Indefinite	22	66	36	3
	645	463	202	85

Schemes for housing are now under consideration.

Plans were submitted for the building of fifteen new houses and alterations on thirteen. Intimations of intention to build four houses and to make alterations on one were also received. These included nine new houses in Thornhill, seven in Dumfries, and three in Annan Districts.

Procedure under the Building Regulations in the County is not satisfactory. These Regulations were made shortly after the passing of the Public Health (Scotland) Act, 1897, in two codes—one applicable to villages and Special Districts, the other to places outwith such areas. The two codes have given rise to confusion, which has been increased by the fact that a new code drafted in 1911, after being discussed by a conference of representatives of District Committees along with a new code of Dairy Regulations, was allowed to drop because an agreement could not be come to between the Local Government Board and the Conference regarding the latter. The result, as might be expected, is further confusion. Not only so, but the building experts at the Board of Health are now approving of conditions which are not quite in accordance with local regulations. The time seems to have come when a proper revision should be made, more especially as the Housing, Town Planning, &c. (Scotland) Act, 1919, Section 43, enacts that local authorities may make bye-laws for a number of matters additional to those which may be made under Section 181 of the Public Health (Scotland) Act, 1897, viz. :—

(a) the approval of plans by the local authority before building or rebuilding operations are begun :
(b) the inspection and certification before occupation ;
(c) the approval by the local authority of the sites :
(d) the maximum number of houses to be erected on a given extent of ground ;
(e) the number of storeys in a tenement containing houses, and the arrangement of such tenements in blocks or otherwise ;
(f) the provision of open spaces about houses :
(g) the provision of suitable access :
(h) the lighting, ventilation, and cubic space of rooms ;
(i) the structure of floors ;
(j) the provision of a bath, and of a scullery, larder, coal-house, adequate press accommodation, and facilities for washing and drying clothes ;
(k) protection against risk of fire, and the provision of means of escape in case of fire.

Four hundred and seven visits of inspection were made to houses under the Public Health and Housing of Working Classes Acts, and the smoke-testing of forty-six new systems of drainage was supervised.

Of seventy complaints received during the year, twenty-three had reference to housing conditions, twenty-five to water supplies, ten to drainage defects, nine to refuse heaps, one to defective sanitary accommodation, one to nuisances created by a cesspool, and one to leakage of coal-gas.

Intimations (other than those instructed under the Special Housing Survey) were issued regarding thirty-seven defects in houses (damp, want of repairs, &c.), forty in water supplies, thirty-three in drains, nine in sanitary accommodation, and twenty-four excessive accumulations of refuse.

Water Supplies.

The results of the examinations of water samples are detailed in the quarterly reports.

Prior to the war the condition of the supplies to the Netherwood, Kelton and Craigs, to Blackshaw, and to Glencaple, were the subject of anxious consideration, and a preliminary survey was carried out by Mr W. C. Easton, M.I.C.E., with a view to advising the District Committee. The war intervened, and the matter was not taken up till 1919, when Mr Easton submitted the following report on November 28th :—

COPY.

" Having thoroughly studied, with the assistance of your Officials, the Rockhall Water difficulty, I beg to report in accordance with the instructions conveyed to me in the District Clerk's letter of 13th June last.

" These instructions were to prepare :—

" (1) A report showing the probable cost of the necessary enlargement of the present supply that might be required for an extension of the District to take in the area embraced in my late firm's report, dated 4th February, 1915, and a further area embracing the present Special Districts of Glencaple and Blackshaw with the remainder of Caerlaverock Parish ;

and

" (2) A report on what may be necessary to improve the supply for the present area as regards quantity and quality should extensions not be made.

" I have prepared and sent herewith two maps, viz. :—

*Map. No. 1 (attached hereto) 6 inches Ordce. showing *Areas*.

*Map No. 2 (large folded) 25 inches Ordce. showing *Works*.

* These Maps are not reproduced here.

Preliminary.

" For convenience the following procedure has been adopted in the report.

" The possible enlarged supply District described in instruction No. 1 is referred to throughout as 'The Extended Area.'

" The different areas, 7 in number, forming 'The Extended Area' have been numbered consecutively, and are referred to by these numbers, which have been marked on the maps.

" The report is divided under the following heads :—

(A) Table of Areas, Populations, &c., in 'The Extended Area.'

(B) Description of Existing Water Works.
Rockhall Water Works.
Blackshaw Water Works.
Glencaple Water Works.

(C) Remarks on Estimates of Cost.

(D) Enlargement of the Rockhall Water Supply necessary for 'The Extended Area' as per instruction No. 1.

(E) Work necessary to improve Rockhall Water Works for the Supply of its present District—as per instruction No. 2.

(F) Conclusion.

" *(A) Table of Areas, Populations, &c., in 'The Extended Area.'*

" The various areas which make up 'The Extended Area,' together with their existing populations, their Mean Rateable Values, their existing Water Rates, and the amount of their existing Water Debts, with the dates on which these debts will be completely redeemed, are shown in the following table :—

Areas Nos. in Report and on Maps.	Description.	Population, 1919.	Mean Rateable Value.			Yield of 1d per £.			Existing Water Rate.	Existing Water Debts.	
										Amount.	Date of completion of Redemption.
	Supplied from Rockhall.		£	s.	d.	£	s.	d.			
1.	Netherwood, Kelton, and Craigs Special District ...	304	2445	13	1	10	3	10	1/11	£1750 at 3% £600 at 3½%	1925 1930
2.	Area (Rockhall Est., &c.) outwith Special District but presently supplied from Rockhall Reservoir ...	639	3306	2	8	13	15	6			
	Total of Areas supplied by Rockhall Water Works ...	943	5751	15	9	23	19	4			
3.	Proposed extension in Dumfries Parish N. of Craigs (Maxwellfield)	185	801	18	0	3	6	10			
4.	Proposed extension in Dumfries Parish S. of Craigs (Jennygills)	83	846	19	5	3	10	7			
5.	Blackshaw Special Water District	250	2502	11	7	10	8	7	3/-	£1750 at 3¼% £450 at 3%	1925 1927
6.	Glencaple Special Water District	182	857	1	3	3	11	5	1/11	£800 at 3% £160 at 3%	1926 1927
7.	Remainder of Caerlaverock Parish	210	2281	5	6	9	10	1			
	Totals	1853	£13,041	11	6	£54	6	10			

" The figures on which the above information has been compiled were furnished to me by the County Clerk and the Medical Officer of Health. The population figures are based on the Police enumeration 1919. The Mean Rateable Values have been calculated from the figures in the Valuation Roll showing the yearly rent or value, and the Annual Value for the purposes of the Agricultural Rates, &c., Act, 1899, and the County Medical Officer has given me every assistance in checking these.

" (*B*) *Description of Existing Water Works.*

" ROCKHALL WATER WORKS.

" These consist, primarily, of a Catchment Area, Reservoir, and Main Piping, belonging to the Rockhall Estate; and, secondly, of Main Piping, and a supply tank—Camphill Tank—the property of the District Committee.

" The Catchment Area extends to not less than 165 acres, and, if fully reservoired with a storage capacity of, say, 20 Million Gallons, would, with the whole flow available for supply, suffice for a population of 5000 persons.

" The reservoir was actually constructed with a storage capacity of barely two million gallons.

" The Estate Main Piping consisted of a four-inch Main from the reservoir to Elizafield, where it divides into three :—

1—3-inch Main to Collin—within the Rockhall Estate.
1—3-inch Main to Wath—within the Rockhall Estate.
1—2½-inch Main to Auld Mills—within the Rockhall Estate.

" As a supply for Rockhall Estate, these works were constructed with an adequate margin, but the demands on them have been increased much beyond those of the Estate.

" These increased demands arose thus :—

" During the construction of the Water Works, Dargavel, to the West of Rockhall Estate, and Mouswald, &c., to the

East, were, by private arrangement, added to the District supplied, which thus became as shown by Area No. 2, and the piping was extended from Collin and Wath accordingly.

" Further, in 1899, fully 2 years after the completion of the Water Works, an agreement was made by the District Committee with the Proprietor of Rockhall Estate which added to the District of Supply the Special Water District then formed of Netherwood, Kelton, and Craigs—Area No. 1. The District Committee thereupon extended the 2½-inch pipe from Auld Mills, through a distance of 2¼ miles *via* Jennygills to Camphill Tank, for the supply of Netherwood and Kelton, and laid a two-inch branch westwards from Jennygills to supply Craigs.

" These additions resulted in :—

(X) A total demand on Rockhall Reservoir 69 per cent. in excess of the call from Rockhall Estate.

(Y) A duty upon the 2½-inch Main, from Elizafield to Camphill Tank, which in its cumulative effect amounted to 100 per cent. in excess of the maximum duty on similar Mains within Rockhall Estate.

" To meet (X) the essential required was an increase in reservoir storage capacity to a total of at least three and one third (3,340,000) million gallons. Levels taken by me, in 1914 and again this year, show that the original capacity of 2,000,000 gallons has been increased twice, thus :—

" Prior to 1914, by the raising of the overflow sill 8½ inches, to the figure of two and one third millions (2,330,000).

' After 1914, by the raising of the overflow sill a further 10½ inches, to the figure of 2½ millions (2,500,000) gallons.

" The latter raising brought the top water level in the reservoir to within 10 inches of the top of the reservoir bank and above the level of the top of the puddle wall. This is distinctly undesirable, and were the District Committee responsible I should recommend that the latter addition of 10½ inches be taken off the overflow sill.

"SUMMARY AS REGARDS ROCKHALL WATER WORKS.

"The position of the Rockhall Water Works in relation to the District—Areas Nos. 1 and 2—presently supplied therefrom, may, in my opinion, be summarized thus:—

"RESERVOIR.—The reservoir is much too small for the work which it has meantime to perform, while the possibilities of increasing its capacity have not only been exhausted but unduly exceeded.

'MAIN PIPING.—The 2½-inch pipe between Elizafield and Camphill Tank has been called upon to work up to its limit; and, in view of its age—20 years—satisfactory working can only be ensured by preparing for a reduction in its work.

"BLACKSHAW WATER WORKS.

"Accompanied by the Medical Officer of Health. I visited these works on 10th June and 15th September last. I have also studied my late firm's report to you dated 4th December, 1914.

"The works consist of a Pumping Station at Kirkblain. a High Level Tank adjoining, and Piping as indicated in dotted lines on the map. They are—owing to the levels—unable to supply the farm of Woodlands. which is in the Special Water District: while the Supply to Shearington and Mains is unsatisfactory. and only possible by keeping the High Level Tank nearly full.

"The pumping engine has been giving trouble for some years, while the cost of running is further augmented by the difficult access for the carts bringing in the fuel—coal. The running cost figures, including upkeep, for the year 1917-1918, were £84 9s 9d, while the salary of the attendant was £57 8s, or a total of £141 17s 9d.

"Various schemes have been before the Committee. It will, however, suffice, meantime to state that to put these works into a condition fit to give a satisfactory supply to their district would cost several thousand pounds—probably not less than £4000; while, as will be necessary, should the present source of supply be adhered to, the new works will include a second pumping station, and the annual cost for running two pumping stations would have to be faced.

"GLENCAPLE WATER WORKS.

"Accompanied, on the first occasion, by the Members of the Sub-Committee, and, on both, by the Medical Officer of Health. I visited these works on 10th June and 15th September last. The supply is, in summer, inadequate for the present population; while there would appear to be a possibility—given a satisfactory Water Supply—of some increase in the population.

"The existing reservoir might, perhaps, just provide sufficient storage for the present population if it were watertight.

"There is, however, a steady leakage through the reservoir bank, apparent even when the reservoir is half full. This leakage, while in no way serious from the point of view of safety, precludes any attempt to increase the reservoir capacity by raising the present top-water level. Leakage of this kind is extremely difficult to rectify, and the cost of attempting to do so might easily exceed that of a new reservoir, with much less satisfactory results. The cost of a new reservoir would amount to several thousand pounds —say, probably not less than £4000.

"The nature of the water is one on which the County Medical Officer can speak, but, on 15th September, when the reservoir was half full, the water was cloudy, and the reservoir contained considerable vegetable and animal life.

"(C) *Remarks on Estimates of Cost.*

"It is almost impossible, under present conditions, to give reliable estimates of cost of works; while it is equally difficult to forecast what the position may be when works come to be constructed, say, some months hence. I have spent considerable time over this question, and my estimates are based on an analysis of the best information available.

“ The prices used, except as regards land, work out at fully 200 per cent. above pre-war figures; so that the corresponding pre-war figures may be arrived at by dividing the amounts of the estimates by three (3).

“ (*D*) *Enlargement of the Rockhall Water Supply necessary for ‘ The Extended Area ’—as per instruction No.* 1.

“ The particulars of the seven areas which make up ‘ The Extended Area ’ are given in the table under Head (A) herein. The present total population is 1853; for new works allow, to commence with, 2000 persons; while the ultimate population has been taken as 2500.

“ The works necessary for this scheme, No. 1, and their probable costs are :—

“ EXTENSION OF ROCKHALL RESERVOIR to a total capacity of ten million (10,000,000) gallons by the construction of a new bank 9 feet higher than, and behind, the existing bank, which will be of some—relatively small—value in forming the inner toe of the new bank ...	£10,000
“ FILTERS AND CLEAR WATER TANK, designed and constructed so as to be capable of extension by adding additional filters if and when required later	3,700
“ NEW MAIN PIPING 9 miles in length 4 inches to 2½ inches diameter from Rockhall Reservoir to Highmains Hill, including two short branches to supply the existing Blackshaw High Level Tank, and the existing 3-inch Glencaple Pipe; and the provision of two Supply Tanks, each about 10,000 gallons capacity, the one on Highmains Hill and the other in lieu of, and at a level of 50 feet above, Glencaple Reservoir ...	10,000
Carry forward	£23,700

Brought forward		£23,700
" Distribution Piping thus :—	Miles.	
For Area No. 3 (Maxwellfield) 3 inches to 1½ inches diameter	5¼	
For Area No. 4 (Jennygills) 1½ inches diameter	1¼	
For Area No. 7 (Caerlaverock) 2 inches and 1½ inches diameter	8½	
Total	15 Miles	9,500
Amount of Estimate for works only ...		£33,200
Add for		
Engineering Inspection and Contingencies, say ...		4,000
Land and Wayleaves. &c.		700
Total for New Works		37,900
or say ...		£38,000

" To this falls to be added the purchase price of the existing Rockhall (Estate) Water Works.

" From the total thus obtained, there falls to be deducted the capitalised saving from dispensing with Blackshaw Pumping Station, and in economy in management which will result from a consolidated scheme—say, at least £100 per annum at 20 years' purchase=£2000 (two thousand pounds).

" The nett total cost—exclusive of the purchase price of the existing Rockhall (Estate) Water Works—of Scheme No. 1 thus becomes £36,000 (thirty-six thousand pounds).

" The following points require note :—

" This scheme, No. 1, which is shown in some detail on map No. 2, will rectify all the defects in the existing Water Works, which have been narrated under Head (B) herein.

" The point, not so far mentioned, of protection against pollution of the water, would be secured by restricting the whole Catchment to pasture, with, on the two fields immediately above the reservoir, the added restriction of—‘ for sheep only.’

“ As regards the existing Piping, the new main would carry the Supply to Camphill Tank as far as Jennygills, and thus give the necessary relief to the existing $2\frac{1}{2}$-inch main between Elizafield and Jennygills.

“ As regards Area No. 5 (Blackshaw) all need for pumping would cease. The present High Level Tank would be fed from Rockhall Reservoir, and its work would be restricted to the supply of only so much of the Blackshaw Area, and any points, *e.g.*, Merkland and Stank, East thereof, as can, on account of levels, be adequately supplied therefrom. The higher points, at present either not supplied or inadequately supplied from the existing Blackshaw Works, would be supplied from the New Highmains Tank, the pipe from which would be coupled up to the existing Blackshaw Piping at a point near Woodlands Cottage.

“ As regards Area No. 6 (Glencaple) the present reservoir and source would be dispensed with.

“ General Scheme No. 1.—With the much larger reservoir storage capacity, the filters might possibly be dispensed with ; and this would reduce the total by fully £4000.

“ The Scheme can to some extent be carried out in instalments.

“ The primary essential is the extension of the Rockhall Reservoir to ten million (10,000,000) gallons capacity. It should be noted that the total cost of this, when its share of the general items is added, and excluding the purchase price of the existing Rockhall (Estate) Water Works, amounts to £12,000.

“ (*E*) *Work Necessary to Improve Rockhall Water Works for the Supply of its Present District—as per instruction No. 2.*

“ The existing population of the present District of Supply—Areas Nos. 1 and 2—see table under Head (A).

is 943, or, for consideration of new works, say 1000 persons.

"The essential and immediate need is, as narrated under Head (B), an increase of at least 70 per cent. in the storage capacity of Rockhall Reservoir, to bring the total up to 3½ million (3,500,000) gallons. This would entail a reservoir bank 3½ feet higher than the existing one. As the existing bank was not built with a view to extension, a new bank, with a new puddle trench and wall, would require to be constructed behind the existing one, which could not be utilised further than as an inner toe in the New Works.

"I have made every endeavour to find a satisfactory solution in a less expensive method, but without success. Perhaps, however, it may be advisable to digress at this stage, and explain why the alternative suggested to me by Members of the Sub-committee, which appears to offer an easy solution, does not, in fact, do so.

"The suggestion was to tap Cleuchbrae Burn immediately below the site of the derelict Herdel Dam.

"The works required under this suggestion, and their cost, would be :—

Intake at Herdel Dam, 1200 yards of 4-inch pipe from thence to Rockhall Reservoir, and inlet chamber, &c., at Rockhall Reservoir	£1,400
Filters and Clear Water Tank for a population of 1000	2,400
Amount of Estimate for Works only ...	£3,800
Engineering Inspection and Contingencies ...	500
Land, Wayleaves, &c.	700
Total for New Works	£5,000

"To this would fall to be added :—

(V) The purchase price of the existing Rockhall (Estate) Water Works, and

(W) Any cost which may be incurred in arranging for the drawing off of water from Cleuchbrae Burn.

"The following points also require to be considered :—

"While the Catchment Area to the Cleuchbrae Burn. at the proposed intake, extends to 130 acres. there is no storage ; and the existing storage at Rockhall is, as already shown, insufficient even for the Rockhall Catchment. Consequently the assistance, which could be given from Cleuchbrae Burn, would be limited to the periods of the year during which the level of the water in the Rockhall Reservoir could not be maintained by the flow from the Rockhall Catchment. That period is, generally speaking. May to October inclusive. and in particular August to October : or the season during which the flow in the Cleuchbrae Burn would be at its minimum. Consequently. even when the District Committee arranged, as would be essential. to have the first call on the whole flow in the Cleuchbrae Burn at the proposed intake, it would not be possible to say that this would prevent shortage in Rockhall Reservoir at the critical periods. Storage in the shape of a Reservoir at Herdel Dam would meet this difficulty : but from the careful examinations, including levels. which I have made. it is clear that this should not be considered. Herdel Dam is an unsuitable site for a reservoir for Domestic Supply. and the cost of such a reservoir would thus be greater than the cost of extending the present Rockhall Reservoir.

"Reverting to the definite solution in the increasing of the storage capacity of the Rockhall Reservoir to a total of at least three and a half million (3.500.000) gallons.

"The works necessary for this—Scheme No. 2—and their probable cost are :—

Extension of Rockhall Reservoir to a total capacity of three and one half millions (3,500,000) gallons, by the constructing of a new bank 3 feet 6 inches higher than, and behind, the existing bank, which will be of some—relatively small—value in forming the inner toe of the new bank	£6,000
Filters and Clear Water Tank for a population of 1000 persons	2,400
Amount of Estimate for Works only ...	£8,400
Engineering Inspection and Contingencies, say ...	1,100
Land and Wayleaves, &c.	500
Total for New Works	£10,000

“To this falls to be added the purchase price of the existing Rockhall (Estate) Water Works.

“The following points require note :—

“This Scheme, No. 2, will only suffice for the supply of the present Rockhall Water District (viz., Areas Nos. 1 and 2), and any proposal in future to extend the present District would bring the Committee up against a repetition of the difficulty which they are now in, viz., the construction of yet another bank for Rockhall Reservoir, in which the two, then existing, banks would only be of relatively small value as an inner toe.

“Before concluding this Head, I would refer to the suggestion made to me, that the protection of the water from possible pollution from cattle grazing on the fields immediately above the reservoir might be secured by running a fence up both sides of the Burn through these fields.

“I estimate that, with the necessary gates, watering troughs, &c., this solution would cost for works alone about £500. I do not, however, consider that it would be a satisfactory and permanent solution of the difficulty ; and I have throughout included in my estimates an amount sufficient to restrict these fields to grazing by sheep only.

"(*F*) *Conclusion.*

" In conclusion, two definite Schemes have been described, viz. :—

Scheme No. 1.—For 'The Extended Area,' as described under Head (D), estimated to cost the nett sum of £36,000 (thirty-six thousand pounds).

Scheme No. 2.—For the present Rockhall District ; involving the extension of Rockhall Reservoir to a total capacity of three and a half million (3,500,000) gallons, with filters, &c., as described under Head (E), estimated to cost £10,000 (ten thousand pounds).

" The purchase price of the existing Rockhall (Estate) Water Works is not included, and therefore falls to be added to the above figures, and also to the other amounts, referring to Rockhall Water Works, which are given in this conclusion.

" Scheme No. 1 includes everything required for a permanent and satisfactory Water Supply to 'The Extended Area.'

" Scheme No. 2 is confined to the immediate needs of the present Rockhall District (Areas Nos. 1 and 2).

" To its cost, therefore, falls to be added the cost of the works necessary to rectify, permanently, the deficiencies in the Blackshaw District Water Works, and in the Glencaple District Water Works ; and also to ease, at no distant date, the work on the 2½-inch Main between Elizafield and Camphill Tank.

" These additions would amount to not less than £10,000, bringing the total of Scheme No. 2 up to not less than £20,000 (twenty thousand pounds).

" Further, the areas, viz. : No. 3 (Maxwellfield), No. 4 (Jennygills), and No. 7 (Caerlaverock), presently without a public Water Supply, would remain unprovided for :

while the development, as a source of Water Supply, of the Rockhall Catchment would be, permanently, arrested at one fifth of its capability.

" Should, however, the cost of Scheme No. 1 force the Committee to fall back on Scheme No. 2, I would venture to ask them to consider the following points :—

" The cost of providing, as an instalment of Scheme No. 1, storage capacity at Rockhall Reservoir of a total of ten million (10,000,000) gallons, would be £12,000 (twelve thousand pounds).

" This cost would provide, for the present Rockhall District (Areas Nos. 1 and 2), a storage fully 180 per cent. in excess of that necessary.

" This excess storage would effect such purification by sedimentation as, in my view, would render the provision of filters unnecessary.

" We have, therefore, in this instalment of Scheme No. 1, a cost of £12,000, against £10,000 when the existing Rockhall District alone is considered, for Scheme No. 2 ; and apparent advantage of £2,000 in favour of Scheme No. 2.

" Taking, however, the wider outlook, the construction of the ten million gallon reservoir would give the District Committee a valuable asset in a large reservoir, and in the means of proceeding, as they saw fit, with an extension of the Rockhall District on the lines of 'The Extended Area.' This would permit of the defects in the Blackshaw and Glencaple Water Works, &c., being dealt with in a temporary and cheaper manner.

" The advantage in cheaper immediate cost is thus transferred in favour of the construction of the ten million gallons (10,000,000) reservoir at Rockhall. There can, I would venture to say, be no question that this course would also be the most economical in the end."

On consideration of the probable estimates, it was felt by the District Committee that the costs were in the meantime prohibitive, and they resolved accordingly. The matter is, therefore, still in abeyance.

There has been no incident of importance in the other Special Districts, except that in Kirkconnel an enlargement of the filtration system has become necessary, and in Moniaive some deficiency was felt in summer, which was improved by attention to the works.

Disposal of Sewage and Pollution of Streams.

Owing to the war and want of sufficient labour the various sewage purification works have not received all the attention required to produce good effluents. The works at Thornhill, in particular, have been practically allowed to become derelict, but steps are being taken towards renewal of the distributors and general improvement. An agreement has been arrived at with the Burgh of Langholm, and approved by the Local Government Board, that the construction of works necessary for the purification of the Burgh Sewage may be delayed to more normal times. The pollution of the Nith by coal-washings from Ayrshire was reported on two occasions, and brought under the notice of the Medical Officer of Health. A number of dead trout were found on one occasion in the Cogs Burn, a tributary of the Crawick, and on investigation this was found to be due to discharge from a sheep-dipping apparatus.

A special report on the drainage of Eaglesfield was called for by an application for permission to place a cesspool in the immediate vicinity of dwelling-houses (which was not granted) and discharge the effluent by an existing drain in the roadway to Cornhill Burn. This burn is already polluted, and enquiry showed that there are at least eight water-closets and twelve sinks in the village draining to it through cesspools. The report went on to say : " The " result is that this is now in a foul state, and the discharge " of sewage, either crude or through cesspools, might quite " justifiably be interdicted by the proprietors and tenant " of Cornhill. Any serious addition to the number of

" water-closets in Eaglesfield will, unless a system of " purification is adopted, greatly increase the nuisance " and become a menace to the health of the area. The " drains which carry the sewage do not appear to have " been laid under the supervision of the Local Authority, " and it is alleged that some of them consist of tiles only. " In certain instances also cesspools have been constructed " too near to houses and very much within the distance " laid down in our Building Regulations. As there is a " tendency to put in more water-closets, it would seem " that the time has come when the whole subject of the " drainage of the village should be considered with a view to " prevent the evils that will arise from putting in water-" closets and drains in the haphazard fashion of the past. " This will probably involve the appointment of an engineer " to report on the present state of the drains, and to submit " a suitable scheme for the future."

Mr W. C. Easton, C.E., Glasgow, has since reported as follows :—

Eaglesfield Drainage.

" On the 19th August I visited the village with the County Medical Officer of Health (Dr J. Maxwell Ross), and the District Clerk (Mr David A. Knox), who went over the whole area with me. I thereafter examined the area and surroundings in more detail, and had the necessary levels taken.

" The village, or, more correctly, Special Water District, extends along the public road from Kirtlebridge Station over a distance of nearly two miles.

" The level of the ground at the upper end—that is, at the boundary at Sunnybrae—of the Water District is, approximately, twenty feet above the level of the ground at the entrance of Kirtlebridge Station.

" Between those extremes the surface, following the road, is in the form of a switchback, with two summits—the one at the Butler's House, and the other at the Post Office—both approximately 33 feet higher than the starting-point at the boundary at Sunnybrae. These summits are over half a mile apart, and between them lies the valley containing the greater part of the village of Eaglesfield. with its lowest point opposite the Schoolhouse, at a level nearly 20 feet below the summit levels, or 13 feet above the starting-point at Sunnybrae.

" The problem, therefore, is how to provide drainage for an area consisting of a narrow strip, which traverses in the centre of its length one complete valley. and at each end the half of a village. Further, the houses are so strung out, that the flat gradients necessitated by the levels of the ground would not permit of anything like satisfactory self-cleansing velocities with the relatively small sewage flow available.

" A fall of 20 feet in nearly two miles. or say 1 in 500. would be unworkable, so that a single gravitation scheme from the water boundary at Sunnybrae is out of the question. apart from consideration of the prohibitive cost of the heavy works, *e.g.*, tunnels, &c., which would be entailed.

" Excluding the Sunnybrae half valley. the levels would permit of a gravitation scheme from the Butler's House to Kirtlebridge Railway Station. A deep sewer. in tunnel. through the Post Office summit, with corresponding lengths of double sewers to collect the sewage where the main sewer would be too deep for direct connections. would. however, be necessary. The cost puts this idea out of consideration.

" In a large scheme it would probably be possible to avoid deep work by finding a way round for a gravitation sewer, but in a small scheme this is not possible.

" The remaining possibility for a scheme with single purification works would be a Pumping Scheme.

" This would entail :—

" A small Pumping Station at the water district boundary at Sunnybrae. with a rising main 500 yards in length to the summit at the Butler's House ;

"A similar Pumping Station in the valley at Eaglesfield School, with a rising main 400 yards long to the Post Office summit ; and

"Purification Works near Kirtlebridge Station.

This would not only involve heavy cost in construction, but also works demanding constant attention at three points, namely, at the two extremities and in the centre ; and the permanent cost of power for, and maintenance of, two pumping stations.

Recommendation.

"The only practicable solution, therefore, is the division of the areas into the three natural sections formed by the lie of the ground, each section being provided with separate Sewage Purification Works.

"Before describing this in detail, the following general points require to be noted.

Population.

"The population, according to the 1911 census, was 558 persons, when the number of houses is stated to have been 154 houses, giving an average per house of 3·62 persons.

"The number of houses in 1919 is stated at 183 houses, which, on the same average figure, would give a population of 662 persons—say a commencing population of 700 persons.

Rateable Value.

"The District Clerk informs me that the present mean assessable rental of the water area is £1534, on which one penny per pound would produce £6 7s 10d.

Estimate of Cost.

"It is almost impossible under present conditions to give reliable estimates of cost of works ; while it is equally difficult to forecast what the position may be when works come to be constructed, say, some months hence. I have spent some time over this question, and my estimates are based on an analysis of the best information available.

“ The prices used, except as regards land, work out at fully 200 per cent. above pre-war figures ; so that the total amount of the estimate requires to be divided by three to arrive at the corresponding pre-war figures.

Gradients.

“ Even with the area sub-divided into three sections, the best gradients possible will frequently be such that the provision of automatic flushing tanks, to flush daily, will be necessary, in order to keep these sewers sweet and clean with the small flow of sewage. Suitable points for these are indicated, and their cost is provided for, although their exact siting will require further consideration.

“ The question of the demand on the water supply for these flushing tanks has been considered, and as the necessity for their use would decrease with increased population, there seems to be no reason for anxiety on this point.

PROPOSED SCHEME.

Sunnybrae Area.

“ Reverting to the scheme recommended, the first section would be for the half valley of the Sunnybrae extremity. Fifty (50) persons seems a full population for this section, so that the work would be quite small.

“ A six-inch sewer is discharging into the ditch immediately, say 100 yards, to the south of the Eastern boundary of the water area, and this sewer would appear to drain at least the majority of the existing houses.

“ With the small quantity of sewage, and the fact that it is discharged well away from the houses and shortly after enters the comparatively large volume of the Kirtle Water, some quite simple arrangement of detritus tank, followed by septic tank and possibly land, or other improvised filtration should give satisfaction. My estimate of the total cost of this, including an allowance for some sewering, is £400 (four hundred pounds).

Eaglesfield (Valley) Section.

" This would comprise the central valley between the summit at the Butler's House and the summit at the Post Office, with the portion from the Police Office joining at the Mission Hall.

" The commencing population allowed for is 450 persons ; but the purification works would be designed so as to be capable of expansion to 50 or 100 per cent. more ; while any increased population, within these limits, would be of real benefit to the sewers in reducing the work of the flushing tanks.

" A suitable site for the purification works is that to the south of Cornhill Farm Steading, and the effluent would discharge into the Eaglesfield Burn in the vicinity of the old disused dam.

" The purification works would consist of septic tanks and continuous filters, with a small preliminary tank to prevent grit entering the septic tank, and a small separator tank, between the septic tank and the filters, to minimise the discharge of suspended solids on to the filters.

" The sludge would be dealt with, in the first instance, in a small trench, and there should be no difficulty about its final disposal.

" My estimate of the total cost of this section amounts to £3800 (three thousand eight hundred pounds).

Kirtlebridge (Half Valley) Section.

" This section would comprise all the water area lying on the half valley to the west of the summit at Eaglesfield Post Office, including Kirtlebridge.

" The commencing population is taken at 200 ; but as this section is, I understand, the one in which building is most likely to develope, the purification works would be designed so as to be capable of expansion for 200 per cent., or even 300 per cent., increase in population. The chief difficulty here is the necessity for crossing the railway lines. These include the Caledonian main line to London. The cost of the crossing, including the necessary attendance and work by the Railway Company's officials and men. and the short periods likely to be available for working. would be relatively heavy. A careful examination of the ground on the Kirtlebridge side of the railway shows that the crossing of the railway is inevitable, as there is no site available otherwise.

" The purification works would be situated on the level portion of the rough ground, containing spoil banks and quarry hole, on the west side of the railway. They would be immediately to the north-west of the ditch after it crosses under the railway, and the effluent would join that ditch before its junction with the Bonshaw Burn.

" The site, apart from the necessity of crossing the railway, would be an excellent site.

" The purification works would be of the same character as those already described for the Eaglesfield (Valley) Section. My estimate of the total cost of this section amounts to £2700 (two thousand seven hundred pounds).

" As regards the line of the sewer, which is shown by a full line on the accompanying plan,* following the main road throughout, this would bring it rather near the bridge over the railway at the cross roads immediately north of Kirtlebridge Station, while the dip in the road just east of the bridge necessitates the sewer being kept down, with correspondingly heavy cutting on the succeeding portion along the Carlisle Road.

" By diverting the sewer, as indicated in dotted lines, along a line a feuing breadth distant from the Carlisle Road, and rejoining that road about 100 yards more or less south-east of the bridge, the possible encroachment on the bridge, and some depth of digging on the main road, could be avoided.

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* Not reproduced.

“ The details of my estimate are :—

“ SUNNYBRAE (HALF VALLEY) SECTION.						
Works	£320	0	0			
Engineering and contingencies	45	0	0			
	£365	0	0			
Land	35	0	0	£400	0	0
“ EAGLESFIELD (VALLEY) SECTION.						
Sewers, flushing tanks, and manholes	£1873	0	0			
Purification works	1388	15	0			
Engineering and contingencies	408	5	0			
	£3670	0	0			
Land and wayleaves	130	0	0	3800	0	0
				£4200	0	0
“ KIRTLEBRIDGE (HALF VALLEY) SECTION.						
Sewers, flushing tanks, and manholes	£1224	1	0			
Railway crossing	500	0	0			
Purification works	550	0	0			
Engineering and contingencies	295	19	0			
	£2570	0	0			
Land and wayleaves	130	0	0	2700	0	0
				£6900	0	0
Say				£7000	0	0

“ My estimate for the whole scheme is therefore £7000 (seven thousand pounds).”

The District Committee, having regard to the heavy cost on a small area, decided that the scheme could not at the present time be gone on with.

Cleansing and Scavenging.

The Special Districts have, on the whole, worked satisfactorily, with the exception that there have been complaints of the rats at two of the depots. At Ecclefechan an attempt to poison them by the use of squills was made. Since the police have taken charge of this matter complaints have not reached the Health Department.

Ashpit nuisances have been very troublesome, more particularly at such places as Kingholm Quay, Cherrytrees, Locharbriggs, Eaglesfield, and to some extent at Watchhill and Upper Kenziels.

Dairies.

There were 384 dairies on the registers at 1st January, and 390 at 31st December. Owing to shortness of staff and difficulties of transport, only 158 visits were made. The dairies are still being administered under the very defective Dairies' Order and Regulations, and a number of premises are on the registers which would not be tolerated under the still suspended Milk and Dairies' Act. There has been a necessity to increase the production of milk in recent years, and this has led perhaps to a little greater attention to quantity than quality. Efforts are being made to improve the quality by the institution of a system of "graded" milk, under which a higher price may be charged if a certain percentage of marks for condition of premises, cows, milkers, &c., is obtained. The idea is good so far, but behind it lurks the danger that the less wealthy consumers may have to be content with milk of a poorer quality.

A curious point in connection with registration arose in the beginning of the year, when it was found that milk had been sent to a creamery in another County with a special mark showing that it was going from unregistered premises. Parties held that they were within their rights in doing this, and were so advised by a representative of the Food Controller, who had further advised that if they got their premises registered a higher price for the milk could be obtained. I reported the facts to the Local Government Board, and asked whether the Dairies' Order had been altered in any way to permit of milk being sent from unregistered premises. The Board replied that they were not aware of any alteration of the Dairies' Order to permit the sale of milk from unregistered premises, but they had forwarded a copy of my letter to the Ministry of Food and Scottish Milk Board for their observations. Later a further letter was received in the following terms :—

" With reference to the Board's letter of 28th February, " in which they stated that the Dairies' Orders have not " been altered in any way so as to permit of the sale of " milk from unregistered premises, it is assumed you are " keeping in mind Article 6 (5) of the Dairies, &c., Order, " 1885, which provides that a person who carries on the " trade of cow-keeper or dairyman for the purpose only " of making and selling butter or cheese or both, and who " does not carry on the trade of purveyor of milk, need not " be registered under the Order.

" The Board have now had replies from the Ministry " of Food and Scottish Milk Board on the subject of your " letter of 5th February. They understand from the " latter that Mr ——— received a permit last year to purchase milk wholesale for cheesemaking, and that Mr " ———, who is an Assistant Executive Officer under the " Scottish Milk Board, was instructed to make a survey " of the district and encourage milk production on the " smaller farms. You will appreciate that under the " conditions prevailing during the past winter it was essential " to obtain every possible gallon of milk, and it would appear " that the necessary action taken for that purpose by the " representative of the Ministry of Food has led the parties " in question to assume that registration by them as purveyors of milk, in terms of the Dairies Order of 1885 "was unnecessary. In these circumstances it is suggested that no action on your part is required further than to point out to those concerned that the provisions of the Dairies Order as to registration are still in operation, and to ensure that these provisions are duly observed by them in future."

Slaughter-Houses.

There are eleven licensed Slaughter-houses—six in Thornhill, one in Dumfries, one in Annan, two in Lockerbie, and one in Langholm Districts. Three licences were allowed to lapse during the war. Generally, these places have been kept in fair condition. At one very little slaughtering is now done. At a second the business has extended beyond the capacity of the premises, and an extension of the latter has been advised.

Offensive Trades.

Three premises are now sanctioned and licensed for these, viz. :—A Bone-boiling Business at Thornhill, a Knackery and Manure Manufactory at Mosspark, and a Tallow-melting Factory at Racks. The bone-boiling at Thornhill has been conducted by treating the bones in a Steam Digestor, and no nuisance has been complained of. The Knackery and Manure Manufactory at Mosspark are sometimes the subject of complaint. The licensee has indicated his intention of making improvements which, it is hoped, may do away with offensive odours. The arrangements at the Tallow-melting Factory have removed one cause of nuisance, but complaints have been made of offensive odours carried to a distance. This has been found to be due to the effluvia being carried into the chimney and not thoroughly destroyed there. It is hoped that passing them through the furnace first may prove effectual.

Factories and Workshops.

Sixty-four visits have been paid to these and to premises of outworkers, which have been found in a fairly satisfactory state. No intimations were received from the Inspector of Factories during the year.

Laboratory.

County Health Laboratory.

To the Medical Officer of Health.

Sir,

I beg to submit a Report on the Bacteriological work performed in this Laboratory during the twelve months ending 31st December, 1919.

One thousand five hundred and sixty-three examinations were made. Details of these are shewn in Table I. It will be observed that the type of examinations required has altered somewhat in consequence of the war. For example, only four samples of milk were submitted for analysis during 1919, as against two hundred samples in 1914. This is mainly a result of the suspension of the Tuberculosis Order of 1913 of the Board of Agriculture. On the other hand, the Venereal Diseases Regulations have entailed the examination of 137 bloods for Wasserman's Reaction, 65 smears for Gonococci, and a number of miscellaneous examinations. The increase in the number of samples of water is due to an arrangement with the Ministry of Munitions, whereby three samples are examined weekly from the supply to Gretna Township.

Swabs for Diphtheria.

566 swabs were examined, of which 122 proved "positive" and 444 "negative." This is the smallest number of swabs submitted in any year since the Laboratory opened, except in 1915.

The various Authorities for whom the examinations were made are shown in Table II. Of the 502 ascribed to the County Landward. 160 were from Annan Combination Hospital, 76 from Lochmaben Combination Hospital, and 32 from Thornhill Combination Hospital.

57 were from persons who had been in contact with cases of Diphtheria.

A large number of the swabs submitted in which Diphtheria bacilli were not detected showed, on the other hand, Streptococci in pure culture. These appeared to be associated with a form of Septic Sore Throat which was prevalent in various parts of the County towards the end of the year.

Eleven swabs were examined for organisms other than the Diphtheria bacillus.

SPUTA FOR TUBERCLE.

These numbered 300, of which 90 shewed the presence of Tubercle bacilli and 210 were "negative." In addition, forty specimens of sputum were submitted for a general examination, mainly in connection with cases of Bronchitis and Broncho-Pneumonia.

BLOODS FOR WIDAL'S REACTION.

These numbered 22 only, as Typhoid Fever has been practically absent from the County. The difficulty of forming an opinion on the result of this test has been materially increased by the fact that men who served with H.M. Forces have been, in almost every case, vaccinated against Typhoid and Paratyphoid Fevers. The test must now be looked upon as a quantitative instead of a merely qualitative one, and must be repeated several times to ascertain whether the agglutinin titre remains constant, or shows a definite rise or fall. All Widal tests in this Laboratory are now made by the macroscopic method—Oxford Standard emulsions of B. Typhosus, B. Paratyphosus A., and B. Paratyphosus B., being used.

BLOODS FOR WASSERMAN'S TEST.

137 bloods and Cerebro-spinal fluids were submitted to this test—of these, 62 were "positive" and 75 "negative." The districts from which the specimens were derived are shewn in Table II. In the majority of cases,

the patients attended at the Laboratory in order to have blood drawn. This has the advantage of ensuring that a sufficient amount of blood is drawn, and, also, a more satisfactory serum is generally obtained than from specimens sent by post. Of the 137 specimens, 132 were blood and 5 Cerebro-spinal fluid. They were derived from 115 patients. The results are analysed in the following table :—

		1st Test.		2nd Test.		3rd Test.		4th Test.		5th Test.	
		+	0	+	0	+	0	+	0	+	0
Patients examined once ...	100	40	60	...	...	...	...	...	...	...	...
Patients examined twice ...	5	5	...	5	...	...	...	...	...	...	...
	2	2	...	...	2	...	...	...	...	...	...
	2	...	2	...	2	...	...	...	...	...	...
	1	...	1	1	...	...	...	...	...	...	...
Patients examined three times	2	2	...	...	2	...	2	...	...	...	...
	1	1	...	...	1	1	...	...	...	...	...
	1	...	1	1	...	...	1	...	...	...	...
Patients examined five times	1	1	...	1	...	...	1	1	...	1	...
Total ...	115	51	64	8	7	1	4	1	...	1	...

Total Positive Tests	62
Total Negative Tests	75
Total Tests	137

It will be seen from the above that 53 patients gave a positive test at some stage of their examination—51 being positive on the occasion of the first test, and two (originally giving a negative reaction) became positive when tested a second time. The two in question were sent for examination two and ten days respectively after the appearance of the primary sore. In both instances vigorous local treatment had been commenced, and attempts to demonstrate the Spironema Pallidum were unsuccessful. It is apparently not yet fully recognised by some practitioners that Wasserman's reaction is not present at the beginning of the primary stage of the disease, and that the diagnosis may be made at that period by demonstrating the Spironema in the chancre exudate. This examination, however, should be made before local treatment has begun.

Sixty-two patients gave a negative reaction throughout.

The 115 patients from whom samples were sent were classified according to sex as follows :—

Males...	68 :	Positive, 30 ;	Negative, 38
Females	43 :	Positive, 22 ;	Negative, 21
Not stated	4 :	Positive, 1 ;	Negative, 3
	115	53	62

Amongst the 51 cases which were positive upon first examination, one had a history of less than a month's disease, five of less than two months, three of less than three months, seven of less than six months, six of less than a year, and five of more than a year. In the remaining cases the history was indefinite, or not supplied.

Amongst the 64 cases negative upon first examination, five gave a history of less than a fortnight's disease, three of less than a month, two of less than two months, four of less than six months, seven of less than a year, one of more than a year, while in the remaining forty-two no sufficient details were given. This latter number, however, contains many cases where there was no history or suspicion of Venereal Disease, and Wasserman's test was resorted to in hopes of clearing up an obscure case.

In regard to previous treatment, six of the positive cases had previously been treated by Salvarsan or its substitutes, twenty-six had received no such treatment. and in nineteen no details were given.

In the group of 64 cases negative on first examination, the figures were three, thirty, and thirty-one respectively.

EXAMINATIONS FOR GONOCOCCI.

Urethra	54	Conjunctive	7
Urine	2	Other	2

Sixty-five specimens were examined for Gonococci, thirty-seven being positive and twenty-eight negative. It is of some interest that the majority of those specimens—48 out of 65—came from rural districts, while the great majority of Wasserman's tests were on patients living in urban areas (see Table II.). It does not seem probable that this bears any relation to the distribution of the two diseases, but rather suggests that in many cases of Gonorrhœa occurring in urban areas bacteriological confirmation is not sought.

EXAMINATION FOR THE SPIRONEMA PALLIDUM.

Only eleven specimens were examined, of which two proved to be positive. The value of this examination in the early diagnosis of Syphilis, before the development of Wasserman's reaction, does not appear to be, as yet, sufficiently recognised. The majority of patients examined had already received local treatment. thus increasing the difficulty of detecting the organisms.

As the number of specimens submitted has been so small. dark-ground illumination has not hitherto been employed. the diagnosis being made on films stained by Giemsa, or a modification of Leishman's stain.

In several instances, where this examination was made to determine whether mouth lesions were specific, the condition was shown to be associated with Vincent's Angina.

ANTHRAX.

Thirty-three specimens of bovine blood were examined for the presence of Bacillus Anthracis, which was found in eight.

All those positive findings were confirmed by the Board of Agriculture.

The seasonal incidence of the Anthrax cases, and the districts in which they occurred, are shown in Table III.

MALARIA.

Of eleven blood films sent in for examination, five showed the presence of Malaria Parasites. The type in each instance was the "Benign Tertian."

It appears that all the patients from whom those specimens were derived acquired the disease while serving with H.M. Forces overseas.

WATER SUPPLIES.

Two hundred and thirty-nine samples of water were submitted to bacteriological examination during the year. Of these, one hundred and fifty-three were from the supply to Gretna Munitions Factory, from which three samples were taken weekly—one from the untreated water, one after chemical treatment, and one from the treated and filtered water as supplied to consumers.

Fifty-eight samples were taken from Special Water District supplies throughout the County, and twenty-eight were from other sources.

Gretna Water Supply.—The improvement in this water as supplied to consumers, which resulted from the introduction in 1918 of chemical treatment prior to filtration, has been maintained. This is well shown by the examinations for B. Coli during 1919.

B. Coli.	Raw Water.	Chemically Treated but Unfiltered.	Filtered.
Absent in 100 c.c. ...	...	76·4%	80·3%
Present in 100 c.c., but not in 10 c.c.... ...	...	11·7%	15·6%
Present in 10 c.c., but not in 1·0 c.c.	7·8%	5·8%	...
Present in 1·0 c.c., but not in 0·1 c.c. ...	17·6%	2%	3·9%
Present in 0·1 c.c. ...	74·5%	3·9%	...

Table IV. shows in graphic form the results obtained from the examination of filtered and unfiltered samples of the Gretna supply before the introduction of Chemical treatment in 1918, contrasted with the figures for unfiltered, chemically treated, and filtered samples since its introduction. The close similarity of the graphs for "chemically treated" and "chemically treated and filtered" samples is noteworthy.

For detailed results of the weekly analyses of this supply reference may be made to the Quarterly Reports.

The results of the analyses of fifty-eight samples from Special Water Districts are shown in Table V.

Twenty-eight samples of water from other sources were analysed. The results are shown in Table VI.

MILKS.

Of the four specimens of milk, two were examined for the presence of organisms of the "Salmonella" group and one for Tubercle bacilli, in each case with a negative result. The fourth was a sample of a patent milk food for Infant Feeding, which, it was suggested, had given rise to Enteritis. Organisms of the Bacillus Coli group were isolated, but no recognised pathogenic types were found.

FÆCES.

Twenty samples of Fæces were submitted for examination—ten for Dysentery, of which two showed Lamblia Intestinalis, and eight were negative for Protozoa and Bacilli ; two for Organisms of the Gærtner Group ; one for B. Typhosus, and one for Tubercle bacilli—all negative ; and six for general examination.

URINES.

Thirteen specimens of Urine were investigated. In six cases the examination was for Abnormal Constituents generally. Three were for B. Coli, two for Gonococci, and one for Schistoma Hæmatobium—all positive ; and one for B. Typhosus, which gave a negative result.

VACCINES.

Thirty-nine Vaccines were prepared on request of practitioners. Twelve of those were Staphylococcal, six Streptococcal, five B. Coli, and sixteen mixed strains.

The other examinations do not appear to call for special comment.

I am, Sir,

Your obedient Servant,

JOHN RITCHIE.

TABLE I.

		1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.	Total.
Swabs for Diphtheria Bacilli	+	36	25	13	48	122	566
	–	100	99	72	173	444	
Swabs for Other Organisms ...	...	2	2	...	7	11	11
Sputa for Tubercle Bacilli	+	27	21	16	26	90	300
	–	61	57	39	53	210	
Sputa for Other Organisms ...	...	19	13	2	6	40	40
Blood for Wasserman's	+	9	13	12	28	62	137
	–	11	16	17	31	75	
Blood for Widal's ...	+	1	...	3	...	4	22
	–	9	2	1	6	18	
Blood for Anthrax ...	+	3	1	3	1	8	33
	–	5	9	4	7	25	
Blood for Malaria ...	+	...	1	4	...	5	11
	–	1	1	2	2	6	
Blood for Cultures ...	..	2	...	1	5	8	8
Blood for Other Examinations	...	1	3	1	6	11	11
Smears for Gonococci ...	+	3	7	15	12	37	65
	–	5	4	8	11	28	
Smears for Spironema Pallidum	+	1	...	1	...	2	11
	–	1	1	5	2	9	
Cerebro-Spinal Fluids	...	2	1	1	7	11	11
Fæces	...	6	7	...	7	20	20
Urine	...	2	4	1	6	13	13
Pus, &c.	...	20	12	6	12	50	50
Milk	...	...	2	1	1	4	4
Water	...	56	55	68	60	239	239
Miscellaneous	...	3	6	2	...	11	11
Total	...	386	362	298	517	...	1563

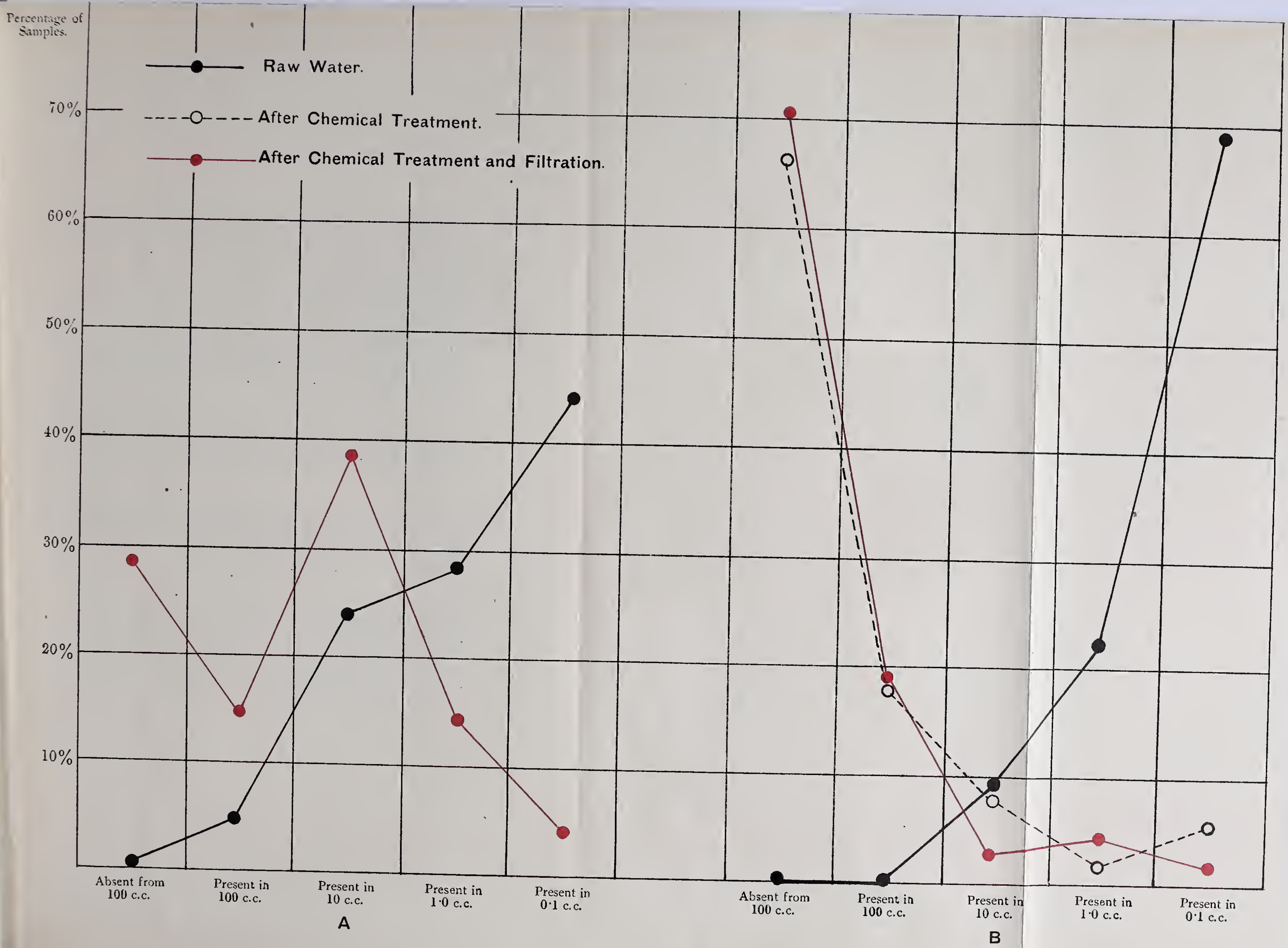
TABLE II.

	County Landward.	Dumfries Burgh.	Sanquhar Burgh.	Annan Burgh.	Langholm Burgh.	Maxwelltown Burgh	Dumfries and Galloway Royal Infirmary.	Ministry of Pensions.	School Medical Officers.	Stewartry of Kirkcudbright	
Swabs	502	2	6	18	4	44	1	...	...	...	577
Sputa	202	14	4	18	9	53	30	10	...	...	340
Wasserman's	16	68	...	...	...	27	19	4	...	3	137
Widal's	14	...	3	...	...	...	5	...	...	...	22
Anthrax	33	...	...	...	...	...	...	...	...	...	33
Malaria	5	...	...	...	...	4	2	...	...	...	11
Blood Cultures	4	...	2	...	...	1	1	...	...	...	8
Other Blood Examinations	8	...	1	...	...	2	...	...	...	...	11
Gonococci	48	4	2	2	1	4	3	1	...	...	65
Spironema Pallida ...	1	8	...	...	...	1	1	...	...	...	11
Cerebro-Spinal Fluids ...	7	2	...	...	...	...	2	...	...	...	11
Fæces	10	2	2	...	1	1	...	4	...	...	20
Urines	8	...	...	...	...	3	2	...	...	...	13
Pus	10	10	...	...	1	7	22	...	...	...	50
Milk	4	...	...	...	...	...	...	...	...	...	4
Water	239	...	...	...	...	...	...	...	...	...	239
Miscellaneous	4	3	...	...	...	...	...	...	4	...	11
Total	1115	113	20	38	16	147	88	19	4	3	1563

TABLE III.

Blood Specimens from Cases of Suspected Anthrax (Bovine).

	Thornhill.	Dumfries	Annan.	Lockerbie.	Langholm.	Total.
1st Quarter ...	1	1	...	6	...	8
2nd Quarter ...	2	4	...	4	...	10
3rd Quarter ...	...	4	1	2	...	7
4th Quarter ...	3	...	...	5	...	8
Total ...	6	9	1	17	...	33


Percentage of Samples.
70%
60%
50%
40%
30%
20%
10%
Raw Water.
After Chemical Treatment.
After Chemical Treatment and Filtration.
Absent from 100 c.c.
Present in 100 c.c.
Present in 10 c.c.
Present in 1·0 c.c.
Present in 0·1 c.c.
A
Absent from 100 c.c.
Present in 100 c.c.
Present in 10 c.c.
Present in 1·0 c.c.
Present in 0·1 c.c.
B

A.—*B. Coli* content of samples taken before the introduction of chemical treatment (21 samples).

B.—*B. Coli* content of samples taken after the introduction of chemical treatment (93 samples).

From this it will be seen that the number of samples of *Filtered* Water which contained *B. Coli* in 10 c.c. or less was, *before* treatment by chemicals was introduced, 56% (omitting decimals).

After treatment was introduced, the number of samples of *Filtered* Water which contained *B. Coli* in 10 c.c. or less fell to 9%.

Correspondingly, the number of samples of *Filtered* Water in which *B. Coli* could not be demonstrated rose from 28% before chemical treatment was introduced to 70% after its employment.

That this improvement is not due to any alteration in the water dealt with is shown by the fact that the proportion of samples of *Raw* Water containing *B. Coli* in 10 c.c. or less remained practically the same before and after the introduction of chemical treatment —96% and 98% respectively.

TABLE V.

Special Water Districts (B. Coli Content).

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.
Thornhill ...	+100 c.c.	+100 c.c.	+100 c.c.	+ 10 c.c.
Moniaive ...	+ 0·1 c.c.	+100 c.c.	+100 c.c.	+ 10 c.c.
Penpont ...	+100 c.c.	– 100 c.c.	+ 10 c.c.	+100 c.c.*
Kirkconnel	+100 c.c.	+ 0·1 c.c.	+ 0·1 c.c.	+ 0·1 c.c.*
Crawick ...	+100 c.c.	+ 10 c.c.	+ 1 c.c.	+100 c.c.
Dumfries Landward	– 100 c.c.	...	+100 c.c.	+100 c.c.
Blackshaw	– 100 c.c.	– 100 c.c.	+100 c.c.	– 100 c.c.
Glencaple ...	+ 10 c.c.	– 100 c.c.	+ 10 c.c.	+ 10 c.c.
Rockhall ...	– 100 c.c.	+100 c.c.	+ 0·1 c.c.	+100 c.c.
Eaglesfield	+100 c.c.	– 100 c.c.	– 1 c.c.	+100 c.c.
Lower Annandale..	– 100 c.c.	– 100 c.c.	+100 c.c.	+ 10 c.c.
Ruthwell and Raffles	–100 c.c.	+ 10 c.c.	– 100 c.c.	– 100 c.c.
Bankshill ...	+100 c.c.	+ 10 c.c.	– 100 c.c.	+100 c.c.
Ecclefechan..	+100 c.c.	+100 c.c.	+ 10 c.c.	+ 10 c.c.
Lockerbie Burgh ...	...	...	...	+ 1 c.c.

* Kirkconnel, 3 samples. Penpont, 2 samples.

TABLE VI.

Serial Number.	Count at Room Temperature.	Count at 37° C.	B. Coli Content.
20	1,000 +	1,000 +	+ 10 c.c.
164	3,000 +	2,240	+ 0·1 c.c.
224	384	...	+ 10 c.c.
271	590	10	+ 10 c.c.
385	2,250	810	+ 0·1 c.c.
491	15,000	10	– 100 c.c.
492	450	60	+ 0·1 c.c.
643	11,800	3,700	+ 0·1 c.c.
673	10,000 +	300	+ 0·1 c.c.
730	9,600	20	+ 10 c.c.
776	...	...	+100 c.c.
777	?	490	+ 1·0 c.c.
778	...	...	– 100 c.c.
826	2,100	140	+ 0·1 c.c.
841	230	...	+ 10 c.c.
868	2,240	330	+ 10 c.c.
871	...	...	+100 c.c.
872	4,000	10	+ 0·1 c.c.
908	2,500	18	+ 0·1 c.c.
934	7,000	3,800	+ 0·1 c.c.
935	950	76	+ 10 c.c.
987	5,000 +	1,080	+ 0·1 c.c.
993	5,000 +	5,920	+ 0·1 c.c.
1068	550	50	+ 10 c.c.
1082	3,300	370	+ 10 c.c.
1236	120	190	+ 1 c.c.
1323	2,080	40	+ 1 c.c.
1485	570	30	+ 1 c.c.

BURGH OF ANNAN.

Area, 383 acres.

Population.—The Census (1911) population was 4219 (male 1959, female 2260). The estimated population for 1919 was 4205 (male 1648, female 2557).

Births.—The number registered in the Burgh during the year was 100 (54 male, 46 female). The rate per 1000 living was 23·781 per 1000. This is above the average rate for the past eight years (1911-18), which was 20·454, but considerably below the averages of the two previous decades—29·692 in 1891-1900; 28·947 in 1901-10.

Six births, or 6 per cent., were illegitimate. The rate per 1000 unmarried women and widows living between the ages of 15 and 45 (estimated at 691) was 8·683.

The legitimate birth-rate per 1000 married women living between the ages of 15 and 45 (estimated at 483) was 194·616.

Only 44 births were intimated under the provisions of the Notification of Births Act. There are no midwives known to be practising in the area. A Maternity and Child Welfare Scheme has not yet been formulated.

Deaths.—The number registered was 51. One death of a non-resident falls to be deducted, and nine of usual residents which occurred elsewhere to be added, making the number for statistical purposes 60, of whom 32 were male and 28 female. The death-rate per 1000 was 14·268; corrected for age and sex distribution (factor ·9628) it was 13·737. The average death-rate during the past eight years has been 15·794 (corrected, 15·206); during the decade 1901-10 it was 15·503 (corrected, 14·946); and during 1891-1900, 21·711 (corrected, 20·903). The deaths from various causes are shown in age-groups in the following table:—

BURGH OF ANNAN.—DEATHS IN 1919.

CAUSE OF DEATH.	All ages.	–1	1–	5–	10–	15–	25–	35	45–	55–	65–	75–	Rate per 1
Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping-cough	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria	1	...	1	...	...	...	...	...	...	...	...	...	·2
Influenza	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	...	...	...	...	...	...	...	...	...	...	...	...	...
Pulmonary Phthisis	3	...	...	...	...	1	...	1	...	1	...	...	·6
Tuberculous Meningitis	1	...	...	...	1	...	...	...	...	...	...	...	·2
Abdominal Tuberculosis	1	...	...	...	...	1	...	...	...	...	...	...	·2
Other Tuberculous Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...
Malignant Diseases	5	...	...	...	...	...	...	...	...	4	1	...	1·1
Rheumatic Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...
Organic Heart Disease	6	...	...	...	...	...	...	...	...	1	4	1	1·3
Bronchitis	6	...	...	...	...	...	...	...	1	1	1	3	1·5
Pneumonia (all forms)	8	2	...	...	1	1	2	...	1	...	...	1	1·
Other Respiratory Diseases	1	...	...	...	...	...	...	...	...	1	...	...	·2
Enteritis (under 2 years)	...	...	...	...	...	...	...	...	...	...	...	...	...
Appendicitis	...	...	...	...	...	...	...	...	...	...	...	...	...
Liver Diseases (not Malignant)	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Digestive Diseases	1	...	...	1	...	...	...	...	...	...	...	...	·2
Nephritis (Bright's Disease)	2	...	...	...	...	...	...	...	1	...	1	...	·
Puerperal Sepsis	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases and Accidents of Pregnancy, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...
Congenital	2	2	...	...	...	...	...	...	...	...	...	...	·
Violence (excluding Suicide)	4	...	...	...	...	...	...	1	...	...	...	...	·2
Suicide	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Defined Diseases	21	...	...	...	...	2	...	...	3	...	11	5	4·
Ill-Defined Diseases	1	...	...	...	...	...	...	...	...	1	...	...	·2
TOTAL	60	4	1	1	2	5	2	2	6	9	18	10	13·7

Deaths under one year of age were 4 (2 male, 2 female). The infantile mortality rate (calculated per 1000 births) was 40. The average of this rate during 1891-1910 was 123. During the past eight years (1911-18) it has been 92. The summary required by the Board is given in the table below :—

BURGH OF ANNAN.

Return of Infantile Mortality for the Year ending 31*st December*, 1919, *showing net Deaths from stated causes at various ages under* 1 *year of age.*

CAUSE OF DEATH.	Under 1 week.	1 and under 2 weeks.	2 and under 3 weeks.	3 and under 4 weeks.	Total under 4 weeks.	4 weeks and under 3 months.	3 and under 6 months.	6 and under 9 months.	9 and under 12 months.	Total deaths under 1 year.
All Causes { Certified	..	...	1	...	1	1	1	...	1	4
All Causes { Uncertified	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...
Chickenpox	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	...
Whooping-cough	...	...	...	...	...	...	...	...	...	...
Diphtheria and Croup	...	...	...	...	...	...	...	...	...	...
Erysipelas	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...
Abdominal Tuberculosis	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases	...	...	...	...	...	...	...	...	...	...
Meningitis (not Tuberculous)	...	...	...	...	...	...	...	...	...	...
Convulsions	...	...	...	...	...	...	...	...	...	...
Pneumonia (all forms)	...	...	...	...	...	...	1	...	1	2
Bronchitis	...	...	...	...	...	...	...	...	...	...
Laryngitis	...	...	...	...	...	...	...	...	...	...
Diarrhœa and Enteritis	...	...	...	...	...	...	...	...	...	...
Other Digestive Diseases	...	...	...	...	...	...	...	...	...	...
Congenital Malformations	...	...	...	...	...	...	...	...	...	...
Premature Birth	...	...	...	...	...	...	...	...	...	...
Atrophy, Debility, and Marasmus	...	...	1	...	1	1	...	...	...	2
Atelectasis	...	...	...	...	...	...	...	...	...	...
Injury at Birth	...	...	...	...	...	...	...	...	...	...
Suffocation, Overlying	...	...	...	...	...	...	...	...	...	...
Syphilis	...	...	...	...	...	...	...	...	...	...
Rickets	...	...	...	...	...	...	...	...	...	...
All other causes	...	...	...	...	...	...	...	...	...	...
TOTAL	...	...	1	...	1	1	1	...	1	4

Net Births in the year—Legitimate, 94.
Illegitimate, 6.

Net Deaths in the year { Legitimate, 4.
under one year of age { Illegitimate, 0

Ages at Death.—Of the 60 deaths,

4 or 6·67 per cent. were under 1 year of age;
1 or 1·67 per cent. were over 1 but under 5;
1 or 1·67 per cent. were over 5 but under 10;
2 or 3·33 per cent. were over 10 but under 15;
5 or 8·33 per cent. were over 15 but under 25;
2 or 3·33 per cent. were over 25 but under 35;
2 or 3·33 per cent. were over 35 but under 45;
6 or 10·00 per cent. were over 45 but under 55;
9 or 15·00 per cent. were over 55 but under 65;
18 or 30·00 per cent. were over 65 but under 75;
10 or 16·67 per cent. were over 75.

Infectious Diseases.—Forty-four notifications were received, thirty-six under the provisions of the Infectious Diseases (Notification) Act, 1889, and eight in terms of Regulations made under Section 78 of the Public Health (Scotland) Act, 1897. They include 14 cases of Scarlet Fever, 21 of Diphtheria, 1 of Erysipelas, and 8 of Pulmonary Tuberculosis.

The fourteen cases of Scarlet Fever occurred in 10 families, 9 having one case in each and 1 having five. The incidence over the year was—one in February, one in March, one in April, one in August, one in September, five in October, one in November, and three in December. All the cases were removed to hospital, and, as indicated, in one instance only did the disease spread beyond the first child attacked. In that instance the children were living in a temporary conversion of the Burgh Store to a dwelling, which would not have been carried out were it not for the housing shortage which has been universally felt since the Great War. The dwelling was not the cause of the outbreak, but it probably produced conditions favourable to spread among those exposed to the infection. There were no fatalities.

Diphtheria was notified from 16 families, there being one case in each of twelve, two in each of three, and three in one. The incidence over the year was—five in January, four in February, one in March, three in June, three in July, one in August, one in September, two in November, and one in December. Swabs were obtained from twenty. Diphtheria bacilli were found on six. The first swabs from the remaining fourteen were negative. In two instances later swabs yielded positive results, but the rest remained negative. There was one fatality.

Under the arrangement with the County Council for dealing with Tuberculosis, five of the cases notified in 1919 and one notified in 1917 were sent to sanatoria or hospital. The case of 1917 had been previously in hospital and was re-admitted. A copy of the return to the Board appears on page 84.

BURGH OF ANNAN.

A.—NUMBER OF CASES NOTIFIED TO THE MEDICAL OFFICER OF HEALTH UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889

DISEASE.	At all Ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards.	Cases removed to Hospital.	Cases not removed to Hospital.
Typhoid or Enteric Fever	...	...	...	...	...	...	...	...	...	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	.	...	...	...	...	...
Scarlet Fever or Scarlatina	14	...	5	8	1	...	...	...	14	...
Diphtheria and Membranous Croup... ...	21	...	5	10	5	1	...	...	20	1
Erysipelas	1	...	...	...	1	...	...	...	...	1
Puerperal Fever	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...
Relapsing Fever	...	...	...	...	...	...	...	...	...	...
Continued Fever ...	...	...	...	...	...	...	...	...	...	...
TOTAL ...	36	...	10	18	7	1	...	...	34	2

B.—NOTIFIED IN TERMS OF REGULATIONS MADE UNDER SECTION 78 OF THE PUBLIC HEALTH (SCOTLAND) ACT, 1897.

Pulmonary Tuberculosis	8	...	...	...	1	3	3	1	5	3
GRAND TOTAL	44	...	10	18	8	4	3	1	39	5

Housing.—During the war there was a considerable addition to the population, which rose from 3854 in 1914 to 5517 in 1917-18. The housing accommodation was greatly strained. More than half the population (2865) were found in one to four-roomed houses, of which there were 608 enumerated. 126 persons were accommodated in 48 one-roomed houses, 848 in 208 two-roomed, 1051 in 200 three-roomed, and 836 in 152 of four rooms each. Four of the one-roomed houses accommodated 5 persons in each, one 6 persons, and in one room 7 were found. Since the armistice was signed the population has been reduced to 4205 in 1919, and conditions have become easier, but housing difficulties still exist to such an extent as to require the housing scheme which is under consideration. Improvements on existing houses are still necessary, more especially the provision of sinks. The Sanitary Inspector reports that 171 houses are still without this convenience.

Water Supply.—This is reported to have been abundant during the year. A local shortage was complained of in one instance to me, and remedied by notice from the Sanitary Inspector to the person responsible. The quality of the supply would seem to be affected to some extent by dust and leaves being carried into the clear water tank, which is uncovered and so unprotected. So far as I am aware, no analyses have been made during the year.

Drainage.—A new man-hole has been constructed at the junction of the sewers in Greencroft Wynd and High Street.

Nuisances.—No certificates for legal proceedings have been required from me, the notices issued by the Inspector being sufficient to secure their removal or abatement.

Unsound Food.—Forty-five seizures were made. The trade at the slaughter-house was much increased under the control of representatives of the Ministry of Food.

Owing to the demand, a fair number of animals of a type not usually seen in slaughter-houses were sent, and a considerable proportion of these were found after slaughter to be unfit for food. and were so certified for the purpose of obtaining a magistrate's warrant to destroy. Unsound food in shops (bacon, butter, herring, &c.) was also seized—in some instances handed over by the shopkeepers themselves before inspection.

The **Slaughter-house** itself. though the killing had largely increased, was kept in a cleanly state. One complaint was received regarding the storing of manure. and reported to the Public Health Committee.

The **Fellmonger's Premises** were found in satisfactory order.

The **Workshops** number 65, and have been regularly visited and found in a clean and well-ventilated state.

BURGH OF SANQUHAR.

Area, 349 acres.

Population.—At the Twelfth Decennial Census (1911) this was 1508 (males 752, females 756). The estimated population for 1919 is 1638 (males 793, females 845).

Births.—The births registered in the Burgh were 30 (13 male, 17 female). The rate per 1000 was 18·315. The average rate for the past eight years (1911-18) was 25·604; for the decade 1901-10, 25·030; for 1891-1900, 26·760.

There were no illegitimate births during the year. The legitimate birth-rate per 1000 married women living between 15 and 45 (estimated at 172) was 174·418.

The number of births intimated under the provisions of the Notification of Births Act were 35. There are no midwives practising in the Burgh. A Maternity and Child Welfare Scheme has not yet been formulated.

Deaths.—The number registered was 18. One death of a non-resident requires to be deducted, and the deaths of three usual residents which occurred elsewhere require to be added, making the total 20. Of these, 11 were male, 9 female. The table below shows the deaths classified as to cause and in age groups. The rate per 1000 living was 12·210; corrected for age and sex distribution it was 11·990. The average death-rate for the previous eight years (1911-18) was 14·194 (corrected, 13·938); for the decade 1901-10, 18·522 (corrected, 18·188); and for 1891-1900, 17·330 (corrected, 17·018).

BURGH OF SANQUHAR.—DEATHS IN 1919.

CAUSE OF DEATH.	All ages.	–1	1–	5–	10–	15–	25–	35–	45–	55–	65–	75–	Rates per 100
Enteric Fever . . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhus Fever . . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever . . .	1	...	...	...	1	...	...	...	...	...	...	...	·60
Whooping-cough . . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria	...	...	...	...	...	...	...	...	...	...	...	...	...
Influenza	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	...	...	...	...	...	...	...	...	...	...	...	...	...
Pulmonary Phthisis . .	1	...	...	...	...	1	...	...	...	...	...	...	·60
Tuberculous Meningitis . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Abdominal Tuberculosis. .	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases .	...	...	...	...	...	...	...	...	...	...	...	...	...
Malignant Diseases . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Rheumatic Fever . . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...
Organic Heart Disease . .	2	...	...	...	...	...	...	...	...	1	1	...	1·20
Bronchitis	1	...	...	...	...	...	...	...	...	1	...	...	·60
Pneumonia (all forms) . .	3	1	...	...	...	...	...	...	2	...	...	...	1·80
Other Respiratory Diseases .	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteritis (under 2 years) .	...	...	...	...	...	...	...	...	...	...	...	...	...
Appendicitis . . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Liver Diseases (not Malignant)	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Digestive Diseases .	...	...	...	...	...	...	...	...	...	...	...	...	...
Nephritis (Bright's Disease) .	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Sepsis . . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases and Accidents of Pregnancy, &c. . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Congenital	1	1	...	...	...	...	...	...	...	...	...	...	·60
Violence (excluding Suicide) .	1	...	...	...	...	1	...	...	...	...	...	...	·60
Suicide	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Defined Diseases . .	10	...	...	...	...	...	...	1	...	1	5	3	6·00
Ill-Defined Diseases . .	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTAL . . .	20	2	...	...	1	2	...	1	2	3	6	3	11·990

Deaths under one year of age were 2 (both male). The infantile mortality-rate (calculated per 1000 births) was 66·6. The average of this rate during the period 1891-1910 was 106. During the past eight years (1911-18) it has been 96. The summary required by the Board is given in the table below :—

BURGH OF SANQUHAR.

Return of Infantile Mortality for the Year ending 31*st December*, 1919, *showing net Deaths from stated causes at various ages under* 1 *year of age.*

CAUSE OF DEATH.	Under 1 week.	1 and under 2 weeks.	2 and under 3 weeks.	3 and under 4 weeks.	Total under 4 weeks.	4 weeks and under 3 months.	3 and under 6 months.	6 and under 9 months.	9 and under 12 months.	Total Deaths under 1 year.
All Causes { Certified	1	...	...	...	1	...	...	1	...	2
All Causes { Uncertified	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...
Chickenpox	...	...	...	...	...	...	...	...	...	...
Measles	..	..	...	...	...	...	...	...	...	...
Scarlet Fever	...	..	...	...	...	...	...	...	...	...
Whooping-cough	...	...	...	...	...	...	...	...	...	...
Diphtheria and Croup	...	...	...	...	...	...	...	...	...	...
Erysipelas	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...
Abdominal Tuberculosis	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases	...	...	...	...	...	...	...	...	...	...
Meningitis (not Tuberculous)	...	...	...	...	...	...	...	...	...	...
Convulsions	...	...	...	...	...	...	...	...	...	...
Pneumonia (all forms)	...	...	...	...	...	...	...	1	...	1
Bronchitis	...	...	...	...	...	...	...	...	...	...
Laryngitis	...	...	...	...	...	...	...	...	...	...
Diarrhœa and Enteritis	...	...	...	...	...	...	...	...	...	...
Other Digestive Diseases	...	...	...	...	...	...	...	...	...	...
Congenital Malformations	...	...	...	...	...	...	...	...	...	...
Premature Birth	1	...	...	...	1	...	...	...	...	1
Atrophy, Debility, and Marasmus	...	...	...	...	...	...	...	...	...	...
Atelectasis	...	...	...	...	..	...	...	...	...	...
Injury at Birth	...	...	...	...	..	...	...	..	...	...
Suffocation, Overlying	...	...	...	...	...	...	...	...	...	...
Syphilis	...	...	...	...	...	...	...	...	...	...
Rickets	...	...	...	...	...	...	...	...	...	...
All other causes	...	...	...	...	...	...	...	...	...	...
TOTAL	1	...	...	...	1	...	...	1	...	2

Net Births in the year—Legitimate, 30.
Illegitimate, 0

Net Deaths in the year { Legitimate, 2.
under one year of age { Illegitimate, 0.

Ages at Death.—Of the 20 deaths,

2 or 10 per cent. were under 1 year of age ;
1 or 5 per cent. were over 10 but under 15 ;
2 or 10 per cent. were over 15 but under 25 ;
1 or 5 per cent. were over 35 but under 45 ;
2 or 10 per cent. were over 45 but under 55 ;
3 or 15 per cent. were over 55 but under 65 ;
6 or 30 per cent. were over 65 but under 75 ;
3 or 15 per cent. were over 75.

Infectious Diseases.—The number of notifications received was 171. One hundred and sixty-seven were made under the provisions of the Infectious Diseases (Notification) Act, 1889, and four in terms of the Regulations made under Section 78 of the Public Health (Scotland) Act. 1897. They included 166 of Scarlet Fever, 1 of Diphtheria, 1 of Ophthalmia Neonatorum, 1 of Acute Primary Pneumonia, 1 of Pulmonary and 1 of Non-Pulmonary Tuberculosis.

The distribution in time of the notifications of Scarlet Fever was :—8 in January, 87 in February, 37 in March, 19 in April, 3 in May, 9 in June, and 3 in July. The outbreak presented some unusual features. It was complicated by a simultaneous outbreak of Influenza, which seems to have influenced it in some degree, as thirty-eight per cent. of the cases removed to hospital did not desquamate, and in sixteen per cent. the desquamation was very indefinite. The one feature common to the great majority of the cases was attendance at the Picture House, which was usually extremely crowded. A proposal to close this was made, but could not be carried out. Though the features were not those of a milk outbreak, the dairies supplying the Burgh were kept under observation. Neither on the workers or cows was any sign of a scarlatinal affection observed. Eventually cases did occur at two of the principal dairy farms, in one instance in the first week of February, and as the patient could not be moved to hospital (the attack was eventually fatal) the cows were taken to another farm, from which the milk, which was much needed, was distributed. In the other, the infection occurred in the first week of March, and the patients were at once removed to hospital. The absence of the hospital porter on military service during this time was severely felt. An appeal to the Tribunal for his exemption made in the previous year failed. A suitable substitute could not be found, but for six months after his departure the admissions were only four. When the outbreak began in January the disinfection of houses (which he usually did immediately on the removal of patients) could not be so quickly carried out, and during the period when the hospital was full his absence threw a heavy strain on the matron and her assistants. Only forty-four per cent. of the notified cases could be removed. Ninety-four families were affected, there being 55 with one case in each, 21 with two, 9 with three, 4 with four, 4 with five, and 1 with six. There was one fatality.

The single case of Diphtheria occurred in October, and was apparently the result of infection brought from a house in Lanarkshire where a case of the disease had occurred.

A copy of the return to the Board is given on page 92.

BURGH OF SANQUHAR.

A.—NUMBER OF CASES NOTIFIED TO THE MEDICAL OFFICER OF HEALTH UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.

DISEASE.	At all Ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards.	Cases removed to Hospital.	Cases not removed to Hospital.
Typhoid or Enteric Fever	...	...	...	...	...	...	...	...	...	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...
Scarlet Fever or Scarlatina	166	5	42	85	23	9	2	...	73	93
Diphtheria and Membranous Croup... ...	1	...	1	...	...	...	...	...	1	...
Erysipelas	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...
Relapsing Fever	...	...	...	...	...	...	...	...	...	...
Continued Fever ...	...	...	...	...	...	...	...	...	...	...
TOTAL ...	167	5	43	85	23	9	2	...	74	

B.—NOTIFIED IN TERMS OF REGULATIONS MADE UNDER SECTION 78 OF THE PUBLIC HEALTH (SCOTLAND) ACT 1897

Ophthalmia Neonatorum	1	1	...	...	...	...	...	...	...	1
Acute Primary Pneumonia	1	...	...	...	1	...	...	...	...	1
Pulmonary Tuberculosis	1	...	...	...	...	...	1	...		1
Non-Pulmonary Tuberculosis	1	...	...	...	1	...	...	...	...	1
GRAND TOTAL ...	171	6	43	85	25	9	3	...	74	97

Housing.—The inhabited houses enumerated at the Census in 1911 were 365. The enumeration by the police in 1919 gives a total of 377. Two plans were examined and reported on. Intimations of defects leading to nuisances were sent to the proprietors of thirteen houses. A representation under the provisions of Section 20 of the Housing of the Working Classes Act, 1890, and Section 17 (2) of the Housing, Town Planning, &c., Act, 1909, was made regarding one house, but the housing shortage prevented further action. The house in question consists of one room. The height from floor to ceiling varies from 7 feet 3 inches to 6 feet 11 inches. The walls suffer very greatly from damp. The floor is constructed of flags and cobbles, and is damp. There are two windows, but these are fixed, and the only ventilation is by one small pane of glass which is made to open in the back window. The ground at the back is about two feet above the level of the floor, but a trench has been cut, in which, however, water stagnates. The rhones at the back are in a state of disrepair, and several of the slates in the roof are dislodged.

The **Common Lodging-house** has usually been found in fair order, but an intimation had to be made after one visit regarding the state of blankets.

The **Water Supply** (for which a private company is responsible) was the subject of complaint by residents in Howie's Road. There are 20 houses in this road. I found that water is led into each house to a scullery tap and to a water-closet flushing cistern. Four of the houses were closed, and I got no information from them. At all the others, with one exception, the complaints were uniformly that the supply was very irregular and intermittent, and that on washing days most of the residents had to go to the pump-well in Castle Street, as they could not get a supply from their house-taps. I tried the taps in the sculleries and found the flow intermittent. If the flushing cisterns were emptied they took nearly ten minutes to refill, and almost invariably caused the flow at the tap to cease. The refilling was not only slow but intermittent, probably due to drawing off water in the neighbouring houses. At Flowerbank the closet has usually to be flushed by hand a most unsatisfactory state of matters in a house where at one time the pressure was good and sufficient. I reported to the Town Council that the supply was distinctly inadequate and that the Water Company should not delay taking such advice as would enable them to give these houses a suitable supply. An engineer has since been called in.

The results of four examinations made during the year (stated as grains per gallon) were :—

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.
Total Solids	4·42	5·71	6·72	6·16
Saline Matter ...	3·81	5·27	6·16	5·66
Volatile Matter ...	·61	·44	·56	·50
Chlorides	·77	·70	·73	·64
Nitrates	·081	·04	·0546	·068
Free Ammonia ...	·000406	·00074	·00064	·000518
Albuminoid Ammonia	·00408	·0035	·0049	·00462
B. Coli found in ...	100 c.c.	10 c.c.	1 c.c.	100 c.c.

The chemical results are favourable. The bacteriological are quite favourable in the first and fourth quarters, less so in the second, and indicate a larger amount of surface pollution in the third than is desirable.

Sewerage.—No complaint has been made of the effluent from the Works to the south of the town. On the north side the sewage from the Lochans, Queensberry Square, and neighbourhood still passes to the river in its crude state.

Dairies.—These are very much in the condition they were in when reported on in 1911.

The **Slaughter-house** is generally in a clean and satisfactory state.

The **Workshops** are nineteen in number, and have usually been found in a satisfactory state. No complaints, whether from Factory Inspector or others, have been made to us. No lists of outworkers have been received.

BURGH OF LOCKERBIE.

Area, 453 acres.

Population.—At the Twelfth Decennial Census (1911) this was 2455 (male 1139, female 1316). The estimated population for 1919 was 2193 (male 940, female 1253).

Births.—The births registered were 36 (20 male, 16 female). The rate per 1000 living was 16·416. The average birth-rate during the previous eight years (1911-18) was 21·298; during 1901-10, 21·299; and during 1891-1900, 26·706.

The illegitimate births were four, or 11 per cent. of the total. The rate per 1000 unmarried women and widows living between the ages of 15 and 45 (estimated at 356) was 11·236.

The legitimate birth-rate per 1000 married women living between 15 and 45 (estimated at 241) was 132·780.

The number of births intimated under the provisions of the Notification of Births Act were 38. There are no midwives known to be practising in the Burgh. A Maternity and Child Welfare Scheme has not yet been formulated.

Deaths.—The number registered was 34. The deaths of four residents which occurred elsewhere have to be added, making the total 38, of which 17 were males, 21 females. The table below shows the deaths classified as to cause and in age-groups. The rate per 1000 living was 17·328. Corrected for age and sex distribution (factor ·8896) this figure becomes 15·412. The average death-rate for the previous eight years (1911-18) was 15·885 (corrected, 14·131); for 1901-10, 16·237 (corrected, 14·444); for 1891-1900, 16·872 (corrected, 15·009).

BURGH OF LOCKERBIE.—DEATHS IN 1919.

CAUSE OF DEATH.	All ages.	−1	1−	5−	10−	15−	25−	35−	45−	55−	65−	75−	Rates per 1000.
Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping-cough	1	...	1	...	...	...	...	...	...	...	...	...	·41
Diphtheria	...	...	...	...	...	...	...	...	...	...	...	...	...
Influenza	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	...	...	...	...	...	...	...	...	...	...	...	...	...
Pulmonary Phthisis	2	...	...	...	...	...	...	...	...	1	1	...	·81
Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...
Abdominal Tuberculosis	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...
Malignant Diseases	4	...	...	...	...	...	...	...	1	1	2	...	1·62
Rheumatic Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Meningitis	1	...	...	1	...	...	...	...	...	...	...	...	·41
Organic Heart Disease	8	...	...	...	...	...	...	2	1	1	1	3	3·24
Bronchitis	1	...	...	...	...	...	...	...	...	1	...	...	·41
Pneumonia (all forms)	3	...	...	...	...	...	...	...	1	2	...	...	1·22
Other Respiratory Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteritis (under 2 years)	...	...	...	...	...	...	...	...	...	...	...	...	...
Appendicitis	...	...	...	...	...	...	...	...	...	...	...	...	...
Liver Diseases (not Malignant)	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Digestive Diseases	1	...	...	...	...	...	...	...	...	1	...	...	·41
Nephritis (Bright's Disease)	2	...	...	...	...	...	...	...	...	...	2	...	·81
Puerperal Sepsis	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases and Accidents of Pregnancy, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...
Congenital	3	3	...	...	...	...	...	...	...	...	...	...	1·22
Violence (excluding Suicide)	...	...	...	...	...	...	...	...	...	...	...	...	...
Suicide	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Defined Diseases	9	...	...	...	...	...	...	...	1	1	...	7	3·65
Ill-Defined Diseases	3	...	...	...	...	...	...	...	2	...	1	...	1·22
TOTAL	38	3	1	1	...	...	...	2	6	8	7	10	15·412

Deaths under one year of age were 3 (1 male, 2 female). The infantile mortality rate (calculated per 1000 births) was 83·3. The average of this rate during 1891-1900 was 102. During the eight past years (1911-18) it has been 107. The summary required by the Board is given in the table below :—

BURGH OF LOCKERBIE.

Return of Infantile Mortality for the Year ending 31st December, 1919, showing net Deaths from stated causes at various ages under 1 year of age.

CAUSE OF DEATH.	Under 1 week.	1 and under 2 weeks.	2 and under 3 weeks.	3 and under 4 weeks.	Total under 4 weeks.	4 weeks and under 3 months.	3 and under 6 months.	6 and under 9 months.	9 and under 12 months.	Total deaths under 1 year.
All Causes { Certified	2	1	...	...	3	...	...	...	...	3
All Causes { Uncertified	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...
Chickenpox	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	...
Whooping-cough	...	...	...	...	...	...	...	...	...	...
Diphtheria and Croup	...	...	...	...	...	...	...	...	...	...
Erysipelas	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...
Abdominal Tuberculosis	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases	...	...	...	...	...	...	...	...	...	...
Meningitis (not Tuberculous)	...	...	...	...	...	...	...	...	...	...
Convulsions	...	...	...	...	...	...	...	...	...	...
Pneumonia (all forms)	...	...	...	...	...	...	...	...	...	...
Bronchitis	...	...	...	...	...	...	...	...	...	...
Laryngitis	...	...	...	...	...	...	...	...	...	...
Diarrhœa and Enteritis	...	...	...	...	...	...	...	...	...	...
Other Digestive Diseases	...	...	...	...	...	...	...	...	...	...
Congenital Malformations	...	1	...	...	1	...	...	...	...	1
Premature Birth	1	...	...	...	1	...	...	...	...	1
Atrophy, Debility, and Marasmus	1	...	...	...	1	...	...	...	...	1
Atelectasis	...	...	...	...	...	...	...	...	...	...
Injury at Birth	...	...	...	...	...	...	...	...	...	...
Suffocation, Overlying	...	...	...	...	...	...	...	...	...	...
Syphilis	...	...	...	...	...	...	...	...	...	...
Rickets	...	...	...	...	...	...	...	...	...	...
All other causes	...	...	...	...	...	...	...	...	...	...
TOTAL	2	1	...	...	3	...	...	...	...	3

Net Births in the year—Legitimate, 32.
Illegitimate, 4.

Net Deaths in the year under one year of age { Legitimate, 3.
Illegitimate, 0.

Ages at Death.—Of the 38 deaths

3 or 7·89 per cent. were under 1 year of age ;
1 or 2·63 per cent. were over 1 but under 5 ;
1 or 2·63 per cent. were over 5 but under 10 ;
2 or 5·26 per cent. were over 35 but under 45 ;
6 or 15·79 per cent. were over 45 but under 55 ;
8 or 21·05 per cent. were over 55 but under 65 ;
7 or 18·42 per cent. were over 65 but under 75 ;
10 or 26·32 per cent. were over 75.

Infectious Diseases.—Eight notifications were received—three being made under the provisions of the Infectious Disease (Notification) Act, 1889, and five in terms of Regulations made under Section 78 of the Public Health (Scotland) Act, 1897. They included 2 cases of Scarlet Fever, 1 of Erysipelas, 1 of Malaria, and 4 of Pulmonary Tuberculosis.

The cases of Scarlet Fever occurred in April and November. In neither case was sufficient information obtainable to permit of the actual source of infection being traced.

The case of Malaria occurred in an ex-soldier who had acquired the disease while serving in the East during the war.

Of the patients notified as suffering from Pulmonary Tuberculosis one had suffered before coming to the Burgh, and another eventually died of Malignant Disease.

A copy of the return to the Board is given on page 100.

BURGH OF LOCKERBIE.

A.—Number of Cases Notified to the Medical Officer of Health under the Infectious Disease (Notification) Act, 1889.

DISEASE.	At all Ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards.	Cases removed to Hospital.	Cases not removed to Hospital.
Typhoid or Enteric Fever	...	...	...	...	...	...	...	...	...	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...
Scarlet Fever or Scarlatina	2	...	...	2	...	...	...	...	2	...
Diphtheria and Membranous Croup... ...	...	...	...	...	...	...	...	...	...	...
Erysipelas	1	...	...	...	...	1	...	...	...	1
Puerperal Fever	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...
Relapsing Fever ...	...	...	...	...	...	...	...	...	...	...
Continued Fever ...	...	...	...	...	...	...	...	...	...	...
Total ...	3	...	...	2	...	1	...	...	2	1

B.—Notified in terms of Regulations made under Section 78 of the Public Health (Scotland) Act, 1897.

DISEASE.	At all Ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards.	Cases removed to Hospital.	Cases not removed to Hospital.
Malaria	1	...	...	...	...	1	...	...	...	1
Pulmonary Tuberculosis	4	...	...	...	...	1	3	...	2	2
Grand Total ...	8	...	...	2	...	3	3	...	4	4

Housing.—The number of inhabited houses at the Census in 1911 was 588. An enumeration in the spring of 1919 showed that there were then 591. As in other burghs, a shortage of houses is being experienced.

Nineteen **Nuisances** were attended to.

The **Common Lodging-house** has been kept in a satisfactory condition.

The **Water Supply** has been examined once and found fairly satisfactory. The chemical results (stated as grains per gallon) were :—

Total Solids...	9·52
Saline Residue	8·91
Volatile Matter	·61
Chlorine	·73
Nitrates	·081
Free Ammonia	·00064
Albuminoid Ammonia ...	·00826

The bacteriological examination indicated that the filtration at the time of taking the sample was allowing some of the water contents to pass which should have been retained.

Sewage.—The effluent from the Sewage Works varies. If it were discharged into a larger stream its effects would be less noticeable.

Slaughter-house.—The private slaughter-houses of pre-war days have been replaced by a very excellent Public Slaughter-house. This is well designed, well equipped, and well conducted.

Dairies.—The Creamery, milk-shop, and cow-byres continue to be well conducted, and do not call for special remark.

BURGH OF MOFFAT.

Area, 305 acres.

Population.—At the Twelfth Decennial Census (1911) this was 2079 (male 895, female 1184). The estimated population for 1919 was 2006 (male 873, female 1133).

Births.—The births registered were 35 (17 male, 18 female). The rate per 1000 living was 17·447. The average birth-rate of the previous eight years (1911-18) has been 14·572 ; of the decade 1901-10, 15·761 ; and for 1891-1900, 18·532.

Six of the births were illegitimate, giving a percentage of 17 to the total number, and a rate per 1000 unmarried women and widows living between 15 and 45 (estimated at 389) of 15·424.

The legitimate birth-rate per 1000 married women living between 15 and 45 (estimated at 152) was 190·789.

The number of births intimated under the provisions of the Notification of Births Act was 18. No midwives are known to be practising in the Burgh. A Maternity and Child Welfare Scheme has not yet been formulated.

Deaths.—The number registered was 30. Five deaths of non-residents require to be deducted, and one death of a usual resident which occurred elsewhere to be added, giving a total of 26, of which 12 were male and 14 female. The deaths, classified according to cause and in age-groups, are shown in the table below. The rate per 1000 living was 12·961 ; corrected for age and sex distribution (factor ·8495) this figure becomes 11·010. The average rate for the previous eight years (1911-18) was 14·572 (corrected, 12·379) ; for the decade 1901-10, 14·156 (corrected, 12·025) ; and for 1891-1900, 18·476 (corrected, 15·695).

BURGH OF MOFFAT.—DEATHS IN 1919.

CAUSE OF DEATH.	All ages.	-1	1-	5-	10-	15-	25-	35-	45-	55-	65-	75-	Rates per 1000.
Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping-cough	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria	...	...	...	...	...	...	...	...	...	...	...	...	...
Influenza	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	...	...	...	...	...	...	...	...	...	...	...	...	...
Pulmonary Phthisis	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...
Abdominal Tuberculosis	1	...	...	...	...	...	...	...	...	...	...	1	·42
Other Tuberculous Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...
Malignant Diseases	2	...	...	...	...	...	...	...	...	1	...	1	·85
Rheumatic Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...
Organic Heart Disease	5	...	...	...	...	...	...	...	1	1	1	2	2·12
Bronchitis	4	...	...	...	...	...	...	1	...	...	...	3	1·69
Pneumonia (all forms)	2	...	...	...	...	...	...	...	...	...	...	2	85
Other Respiratory Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteritis (under 2 years)	...	...	...	...	...	...	...	...	...	...	...	...	...
Appendicitis	...	...	...	...	...	...	...	...	...	...	...	...	...
Liver Diseases (not Malignant)	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Digestive Diseases	1	...	...	...	...	...	...	...	...	...	...	1	·42
Nephritis (Bright's Disease)	3	...	...	...	...	...	...	...	...	2	...	1	1·27
Puerperal Sepsis	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases and Accidents of Pregnancy, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...
Congenital	...	...	...	...	...	...	...	...	...	...	...	...	...
Violence (excluding Suicide)	4	1	1	...	...	...	...	...	...	...	...	2	1 69
Suicide	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Defined Diseases	4	...	...	...	...	...	...	...	...	1	1	2	1·69
Ill-Defined Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTAL	26	1	1	...	...	...	...	1	1	5	2	15	11·010

There was one death under one year of age, a male child. The infantile mortality-rate (calculated per 1000 births) was 28·6. The average of this rate during 1891-1910 was 80. The average for the past eight years (1911-18) was 38·3. The summary required by the Board is given in the table below :—

BURGH OF MOFFAT.

Return of Infantile Mortality for the Year ending 31*st December*, 1919, *showing net Deaths from stated causes at various ages under* 1 *year of age.*

Cause of Death.	Under 1 week.	1 and under 2 weeks.	2 and under 3 weeks.	3 and under 4 weeks.	Total under 4 weeks.	4 weeks and under 3 months.	3 and under 6 months.	6 and under 9 months.	9 and under 12 months.	Total Deaths under 1 year.
All Causes { Certified	1	...	...	...	1	...	...	...	...	1
All Causes { Uncertified	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	..	...
Chickenpox	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	...
Whooping-cough	...	...	...	...	...	...	...	...	...	...
Diphtheria and Croup	...	...	...	...	...	...	...	...	...	...
Erysipelas	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...
Abdominal Tuberculosis	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases	...	...	...	...	...	...	...	...	...	...
Meningitis (not Tuberculous)	...	...	...	...	...	...	...	...	...	...
Convulsions	...	...	...	...	...	...	...	...	...	...
Pneumonia (all forms)	...	...	...	...	...	...	...	...	...	...
Bronchitis	...	...	...	...	...	...	...	...	...	...
Laryngitis	...	...	...	...	...	...	...	...	...	...
Diarrhœa and Enteritis	...	...	...	...	...	...	...	...	...	...
Other Digestive Diseases	...	...	...	...	...	...	...	...	...	...
Congenital Malformations	...	...	...	...	...	...	...	...	...	...
Premature Birth	...	...	...	...	...	...	...	...	..	...
Atrophy, Debility, and Marasmus	...	...	...	...	...	...	...	...	..	...
Atelectasis	...	...	...	...	...	...	...	...	..	...
Injury at Birth	...	...	...	...	...	...	...	...	...	...
Suffocation, Overlying	...	...	...	...	...	...	...	...	...	...
Syphilis	...	...	...	...	...	...	...	...	.	...
Rickets	...	...	...	...	...	...	...	...	...	...
All other causes	1	...	...	...	1	...	...	...	...	1
Total	1	...	...	...	1	...	...	...	...	1

Net Births in the year —Legitimate, 29.
Illegitimate, 6.

Net Deaths in the year under one year of age { Legitimate Infants, 1.
Illegitimate Infants, 0.

Ages at Death.—Of the 26 deaths.

1 or 3·85 per cent. were under 1 year;
1 or 3·85 per cent. were over 1 but under 5;
1 or 3·85 per cent. were over 35 but under 45;
1 or 3·85 per cent. were over 45 but under 55;
5 or 19·23 per cent. were over 55 but under 65;
2 or 7·69 per cent. were over 65 but under 75;
15 or 57·69 per cent. were over 75.

Infectious Diseases.—Nine notifications were received—five under the provisions of the Infectious Diseases (Notification) Act, 1889, and four in terms of the Regulations made under Section 78 of the Public Health (Scotland) Act, 1897. They included 4 cases of Scarlet Fever, 1 of Diphtheria, 1 of Acute Primary Pneumonia, 2 of Pulmonary, and 1 of Non-Pulmonary Tuberculosis.

The cases of Scarlet Fever occurred in December among school children, whose ages were 7, 10, 12, and 14 respectively. There was reason to suspect the presence in the town of one or more ambulant cases, but no such were found at school in this month.

The case of Diphtheria was reported in January. Swabs taken while the patient was in hospital did not reveal the presence of Diphtheria bacilli.

The case of Pneumonia proved rapidly fatal, as was also the case of Non-Pulmonary Tuberculosis, both being in elderly persons.

One of the patients suffering from Pulmonary Tuberculosis was sent to Bridge-of-Weir Sanatorium in the beginning of 1920.

A copy of the return to the Board appears on page 106.

BURGH OF MOFFAT.

A.—NUMBER OF CASES NOTIFIED TO THE MEDICAL OFFICER OF HEALTH UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.

DISEASE.	At all Ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards.	Cases removed to Hospital.	Cases not removed to Hospital.
Typhoid or Enteric Fever	...	...	...	...	...	...	...	...	...	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...
Scarlet Fever or Scarlatina	4	...	...	4	...	...	...	...	4	...
Diphtheria and Membranous Croup... ...	1	...	...	...	...	...	...		1	...
Erysipelas	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...
Relapsing Fever	...	...	...	...	...	...	...	...	...	...
Continued Fever... ...	...	...	...	...	...	...	...	...	...	...
TOTAL ...	5	...	...	4	1	...	...	...	5	...

B.—NOTIFIED IN TERMS OF REGULATIONS MADE UNDER SECTION 78 OF THE PUBLIC HEALTH (SCOTLAND) ACT, 1897

Acute Primary Pneumonia	1	...	...	...	...	...	...	1	...	1
Pulmonary Tuberculosis	2	...	...	...	...	2	...	...	...	2
Non-Pulmonary Tuberculosis	1	...	...	...	...	...	...	1	...	1
GRAND TOTAL ...	9	...	...	4	1	2	...	2		4

Housing.—The inhabited houses enumerated at the Census in 1911 were 507. At an enumeration made by the police in 1919 they were 509.

Additions and alterations, chiefly of sanitary fittings, were made in seventeen, under the supervision of the Sanitary Inspector. The old type of pan-closet is gradually giving way to more modern substitutes, eight of these having been replaced during the year.

Water Supply.—This, which is from springs on Granton, appears to have been satisfactory. No samples have been taken for analysis, and I am unable to speak definitely of the quality, but there are no likely sources of contamination, and no complaints have been made regarding it.

The **Sewage Works** have not been inspected regularly as in pre-war days, but they appear to work satisfactorily so far as the effluent is concerned, and no complaints regarding pollution of the stream have been received.

Nuisances.—The Sanitary Inspector has attended to twenty-three complaints, which have been remedied without intervention from the Medical Officer of Health, and no certificates have been required from him.

The **Slaughter-house** is kept in a satisfactory state.

The **Workshops** have been regularly visited by the Sanitary Inspector, who reports that he has found them all in a cleanly and wholesome condition.

BURGH OF LANGHOLM.

Area, 204 acres.

Population.—At the Twelfth Decennial Census this was 2930 (male 1315, female 1615). The estimated population for 1919 was 2852 (male 1239, female 1613).

Births.—The births registered were 34 (18 male, 16 female). The rate per 1000 living was 11·921. The average birth-rate for the previous eight years (1911-18) was 14·013; for the decade 1901-10, 17·985; and for 1891-1900, 20·112.

One of the births was illegitimate, giving a percentage of 2·94 to the total, and a rate of 1·992 per 1000 unmarried women and widows living between the ages of 15 and 45 (these being estimated at 502).

The legitimate birth-rate per 1000 married women living between 15 and 45 (estimated at 241) was 136·929.

The number of births intimated under the provisions of the Notification of Births Act was 37. No midwives are known to be practising within the Burgh. A Maternity and Child Welfare Scheme has not yet been formulated.

Deaths.—The number registered was 43. The deaths of four non-residents require to be deducted, and those of three usual residents which occurred elsewhere to be added, making the total 42 (15 male, 27 female). The table given below shows the deaths classified according to cause and in age-groups. The rate per 1000 living was 14·726; corrected for age and sex distribution (factor ·8714) it was 12·831. The average death-rate of the eight previous years (1911-18) was 16·143 (corrected, 14·067); for 1901-10, 17·071 (corrected, 14·876); for 1891-1900, 16·692 (corrected, 14·545).

BURGH OF LANGHOLM.—DEATHS IN 1919.

CAUSE OF DEATH.	All ages.	–1	1–	5–	10–	15–	25–	35–	45–	55–	65–	75–	Rates per 1000.
nteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
yphus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
mallpox	...	...	...	...	...	...	...	...	...	...	...	...	...
easles	...	...	...	...	...	...	...	...	...	...	...	...	...
carlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
hooping-cough	...	...	...	...	...	...	...	...	...	...	...	...	...
iphtheria	...	...	...	...	...	...	...	...	...	...	...	...	...
fluenza	...	...	...	...	...	...	...	...	...	...	...	...	...
rysipelas	...	...	...	...	...	...	...	...	...	...	...	...	...
ulmonary Phthisis	3	...	...	...	...	1	2	...	...	...	...	...	·92
uberculous Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...
bdominal Tuberculosis	...	...	...	...	...	...	...	...	...	...	...	...	...
ther Tuberculous Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...
alignant Diseases	7	...	...	...	...	...	...	2	1	1	2	1	2·14
heumatic Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
eningitis	...	...	...	...	...	...	...	...	...	...	...	...	...
rganic Heart Disease	8	...	...	...	...	...	...	...	1	1	2	4	2·44
ronchitis	4	...	...	...	...	...	...	...	...	1	1	2	1·22
neumonia (all forms)	2	...	...	...	...	...	...	...	...	...	1	1	·61
ther Respiratory Diseases	2	...	...	...	...	...	...	...	...	...	...	2	·61
nteritis (under 2 years)	...	...	...	...	...	...	...	...	...	...	...	...	...
ppendicitis	...	...	...	...	...	...	...	...	...	...	...	...	...
iver Diseases (not Malignant)	...	...	...	...	...	...	...	...	...	...	...	...	...
ther Digestive Diseases	1	...	...	...	...	...	...	...	...	...	1	...	·31
ephritis (Bright's Disease)	...	...	...	...	...	...	...	...	...	...	...	...	...
uerperal Sepsis	...	...	...	...	...	...	...	...	...	...	...	...	...
ther Diseases and Accidents of Pregnancy, &c.	1	...	...	...	...	...	1	...	...	...	...	...	·31
ongenital	2	2	...	...	...	...	...	...	...	...	...	...	·61
iolence (excluding Suicide)	2	...	...	...	...	...	1	...	...	...	...	1	·61
uicide	1	...	...	...	...	...	...	...	...	...	1	...	·31
ther Defined Diseases	8	1	...	...	...	...	...	...	1	...	4	2	2·44
-Defined Diseases	1	...	...	...	...	...	...	1	...	...	...	...	·31
TOTAL	42	3	...	...	...	1	4	3	3	3	12	13	12·831

There were three deaths of children under one year of age (2 male, 1 female). The infantile mortality-rate (calculated per 1000 births) was 88·2. The average of this rate from 1891 to 1910 was 93. The average for the past eight years (1911-18) has been 67. The summary required by the Board is given in the table below :—

BURGH OF LANGHOLM.

Return of Infantile Mortality for the Year ending 31st December, 1919, showing net Deaths from stated causes at various ages under 1 year of age.

Cause of Death.	Under 1 week.	1 and under 2 weeks.	2 and under 3 weeks.	3 and under 4 weeks.	Total under 4 weeks.	4 weeks and under 3 months.	3 and under 6 months.	6 and under 9 months.	9 and under 12 months.	Total Deaths under 1 year.
All Causes { Certified	2	...	...	...	2	1	...	...	...	3
All Causes { Uncertified	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...
Chickenpox	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	...
Whooping-cough	...	...	...	...	...	...	...	...	...	...
Diphtheria and Croup	...	...	...	...	...	...	...	...	...	...
Erysipelas	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...
Abdominal Tuberculosis	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases	...	...	...	...	...	...	...	...	...	...
Meningitis (not Tuberculous)	...	...	...	...	...	...	...	...	...	...
Convulsions	...	...	...	...	...	...	...	...	...	...
Pneumonia (all forms)	...	...	...	...	...	...	...	...	...	...
Bronchitis	...	...	...	...	...	...	...	...	...	...
Laryngitis	...	...	...	...	...	...	...	...	...	...
Diarrhœa and Enteritis	...	...	...	...	...	...	...	...	...	...
Other Digestive Diseases	...	...	...	...	...	...	...	...	...	...
Congenital Malformations	...	...	...	...	...	1	...	...	...	1
Premature Birth	...	...	...	...	...	...	...	...	...	...
Atrophy, Debility, and Marasmus	1	...	...	...	1	...	...	...	...	1
Atelectasis	...	...	...	...	...	...	...	...	...	...
Injury at Birth	...	...	...	...	...	...	...	...	...	...
Suffocation, Overlying	...	...	...	...	...	...	...	...	...	...
Syphilis	...	...	...	...	...	...	...	...	...	...
Rickets	...	...	...	...	...	...	...	...	...	...
All other causes	1	...	...	...	1	...	...	...	...	1
TOTAL	2	...	...	...	2	1	...	...	...	3

Net Births in the year—Legitimate, 33.
Illegitimate, 1.

Net Deaths in the year—Legitimate, 3.
Illegitimate, 0.

Ages at Death.—Of the 42 deaths,

3 or 7·14 per cent. were under 1 year ;
1 or 2·38 per cent. were over 15 but under 25 ;
4 or 9·53 per cent. were over 25 but under 35 ;
3 or 7·14 per cent. were over 35 but under 45 ;
3 or 7·14 per cent. were over 45 but under 55 ;
3 or 7·14 per cent. were over 55 but under 65 ;
12 or 28·57 per cent. were over 65 but under 75 ;
13 or 30·95 per cent. were over 75.

Infectious Diseases.—Twelve notifications were received —two under the provisions of the Infectious Disease (Notification) Act, 1889, and ten in terms of the Regulations made under Section 78 of the Public Health (Scotland) Act, 1897. They included 2 cases of Scarlet Fever, 3 of Malaria, 3 of Acute Primary Pneumonia, and 4 of Pulmonary Tuberculosis.

The cases of Scarlet Fever were notified in January and October. One was treated at home, the other removed to Hospital. In neither case was there any known spread of infection.

The cases of Malaria occurred in ex-soldiers.

Of the four suffering from Pulmonary Tuberculosis two made arrangements for private sanatorium treatment in the South of England. Another patient notified in a previous year was sent to Westmorland Sanatorium.

A copy of the return to the Board appears on page 112.

BURGH OF LANGHOLM.

A.—NUMBER OF CASES NOTIFIED TO THE MEDICAL OFFICER OF HEALTH UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.

DISEASE.	At all Ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards.	Cases removed to Hospital.	Cases not removed to Hospital.
Typhoid or Enteric Fever	...	...	...	...	...	...	...	...	...	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...
Scarlet Fever or Scarlatina	2	...	...	2	...	...	...	...	1	1
Diphtheria and Membranous Croup... ...	...	...	...	...	...	...	...	...	...	...
Erysipelas	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...
Relapsing Fever	...	...	...	...	...	...	...	...	...	...
Continued Fever ...	...	...	...	...	...	...	...	...	...	...
TOTAL ...	2	...	...	2	...	...	...	...	1	1

B.—NOTIFIED IN TERMS OF REGULATIONS MADE UNDER SECTION 78 OF THE PUBLIC HEALTH (SCOTLAND) ACT, 1897.

Malaria	3	...	...	...	1	2	...	...	...	3
Acute Primary Pneumonia	3	...	...	...	...	1	...	2	...	3
Pulmonary Tuberculosis	4	...	...	...	...	3	1	...	2	2
GRAND TOTAL ...	12	...	...	2	1	6	1	2	3	9

Housing.—The number of inhabited houses at the Census was 798. At the enumeration made in the spring of 1919 they were 797. No complaints of housing defects were made directly to me, and any made to the Sanitary Inspector have been remedied by intimation from him. In two instances water-closets have been renewed; in two others defective water-closets have been repaired. Buchan traps have been placed in three systems of drainage. Bell traps have been abolished in two. Choked drains have been cleared in six instances, and two premises found in dirty condition have been cleansed.

The **Common Lodging-house** which existed prior to the war has ceased to exist as such, and at present there is none in the Burgh.

Water Supply.—No samples have been taken for analysis, but the quality apparently remains good. In past years there have been some complaints of discolouration after rains, but none such have reached me during 1919.

Sewage.—During the war an agreement was arrived at between the Board, County Council, and Town Council that works for purification of the sewage would be installed when prices had reached a more normal level, of which the Board would be the judge. That time is not yet.

Slaughter-houses.—There are three licensed Slaughter-houses. These have been inspected from time to time, and found in fair condition. There is no public slaughter-house.

Dairies and Cowsheds.—There are six on the Register. The Regulations regarding whitewashing, &c., are usually observed, but the premises are not as a rule of the most satisfactory kind. A Veterinary inspection of the animals is also desirable.

Factories and Workshops.—There are twenty-one Workshops on the Register. They include the premises of five bakers, six tailors, three dressmakers, one saddler, two printers, two laundries, and two shoemakers. These have been found in good order. A complaint from the Factory Inspector of insufficient sanitary accommodation at one of the factories has led to the addition of three water-closets.